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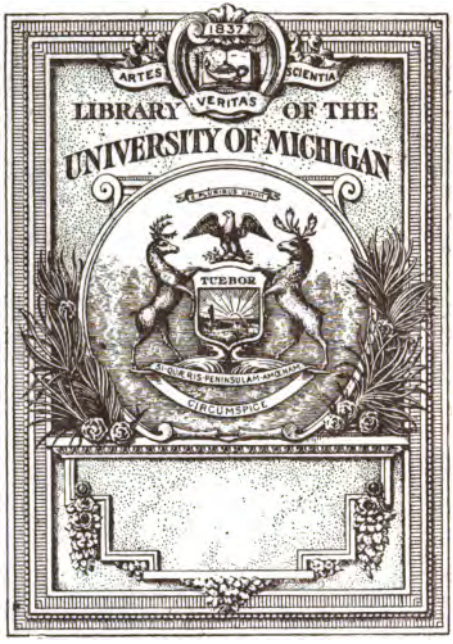
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MONEY AND PRICES

CREDIT OF THE NATIONS

LATTER-DAY PROBLEMS

INDUSTRIAL AMERICA

THE PRINCIPLES OF MONEY

CHARLES SCRIBNER'S SONS

MONEY AND PRICES

MONEY AND PRICES

BY

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the University of Chicago

NEW YORK
CHARLES SCRIBNER'S SONS
1919

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PREFACE

No practical economic problem has been brought more prominently to the front than that of prices and how they are regulated. It is said that the high rate of war wages cannot come down until prices of the articles consumed by the laborer fall. Indeed, cost of living to every one is involved in the price question. Why, then, have prices gone up? To what force must we look for their decline? Some writers have asserted that prices rise and fall because of the quantity of money in circulation, or the volume of credit devices. On the other hand, there was no such expansion of money or credit as would account for the rise of war prices in this country. Every business man, moreover, knows that higher wages for no greater labor effort have raised prices. It is a very timely subject, indeed, for all of us.

Rec'd 1-22-30 A.V.M.

Instead of making a complex and theoretical exposition of prices and their causes, it occurred to the author that, after a simple statement of the principles involved, the forces regulating prices might be clearly interpreted for the general reader by the means of practical chapters from the history of prices since 1850, extending to the end of the European War.

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Such a plan enables the relation of the production of gold to the price level, the great lack of uniformity in the prices of different groups of articles—especially in agricultural products as contrasted with other groups—and the mooted question of inflation as a cause of high war prices, to be treated in this volume. Thus it might not be uninteresting to present the workings of the fundamental principles of money—not in dry, theoretical essays, but in the form of studies upon actual happenings and emergencies in the experiences of recent decades down to the present day. A unity of treatment was thus obtained which, it is hoped, has not been impaired by the introduction of several topics which belonged as corollaries to the main course of the exposition. These also were episodes of our actual experience.

J. LAURENCE LAUGHLIN.

JAFFNEY, N. H., 1919.

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MONEY AND PRICES

CHAPTER I

A THEORY OF PRICES

§ 1. Assuming that the problem of the *theory of prices* is the same problem as that of the *value of money*, we are at once required to explain that by value of money we mean the *exchange value* of money. With this understanding it is evident that the level of prices is only a statement of the exchange value of money in terms of goods in general. A fall, for example, in the value of money necessarily carries with it the fact of a rise in the prices of goods. In the relation of a particular commodity to money, price is the quantity of the money for which it will exchange. If we are speaking of gold prices, the price of a single commodity is the quantity of gold for which it will exchange. One cannot think of price except as a ratio.[1]

The theory of prices, therefore, is clearly a question of exchange value. Consequently, its attainment does

[1] It is impossible for me to understand Professor Kinley's idea of value as "the quantity of marginal utility of an economic good"; and that the unit of value may be "the amount of value in a chosen quantity of any article" (*Money*, p. 62). The qualities of an article inhere in it; its utility arises from a relationship between these qualities and the needs of men; and these matters affect the exchange value of an article. How can we take a *quantitative* measure of the relation between the qualities of a commodity and men's regard for these qualities? This gives us no explanation of exchange value.

not appear to me to be involved in the solution of the fundamental theories of value, such as the case of marginal utility versus cost of production. Even if value be regarded as an unrelated magnitude of utility, or as subjective importance, we should still have the problem of exchange value. Whatever may be the various theories suggested as regulating the value of gold, or of a given commodity, we cannot escape the fact that exchange value between gold and goods is the problem of the value of money. And there seems to be a general concurrence in this simple proposition.[1] I am certainly in general agreement with most economists at this point.

§ 2. When we mention the value of money, however, it is also necessary to know what we mean by "money." At this point we must, as investigators, be willing frankly to admit that there is no agreement whatever as to the usage of the term "money." Even the same writer will use it in different senses. To some, as Nicholson, for instance, money—so far as it concerns prices—is gold and nothing else; to others, like Walker, it includes also government paper and bank-notes; to still others it includes all the forms of credit such as bills of exchange and checks.

[1] J. S. Mill: Price is "the quantity of money for which it will exchange" (Book III, chap. I, § 1). A. T. Hadley: "A price, in the commercial sense of the word, may be defined as the quantity of money for which the right to an article or service is exchanged" (*Economics*, p. 72). *Cf.* also Seager, *Political Economy*, p. 51; W. A. Scott, *Money and Banking*, p. 34, and many others.

It is evident enough that progress can be made only by some definite conceptions of the functions of money. In my opinion the distinction between the standard commodity in which prices are expressed, and the media of exchange by which goods are in fact conveniently transferred, is essential to any insight into the real problem of prices. This distinction is simple enough, but it is far-reaching in its influence on the price question. For instance, we, in the United States, have the gold standard; and by our definition the price of any commodity is the quantity of gold for which it will exchange. If this be so, the means for the analysis of price changes are to be found, very evidently, in the relative values of goods and gold. Exchange value being not an absolute but a relative thing, we must, in a study of the price problem, deal with all the forces which can influence the ratio between goods and gold. To deal only with those affecting gold, or the money side of the ratio, to discuss only the demand for gold and the supply of it, would be inadequate and unscientific. To assign the causes of changes of price chiefly to variations in the quantity of money is not only one-sided, it is also ambiguous; because "money" is only one side of the price ratio, and to those taking this point of view "money" may not mean only the standard commodity.

To this point, obviously, everything is simple; but here an honest inquirer rightly may suggest that there

may be forces working on the value of gold, and thus on prices, caused by the volume of other forms of money than gold, such as government paper, bank-notes, and forms of credit; and this is more or less true. In the evolution of monetary conveniences, society has constantly aimed at finding safe media of exchange to avoid loss from the use of the valuable standard, which fully accounts for the creation centuries ago of such institutions as the banks of Venice and Amsterdam; for the invention of the bill of exchange; for bank-notes; and more lately, for checks and deposits and clearing-houses. In the main, the effect on the value of gold of an increase or decrease in the volume of the media of exchange works on prices only in so far as it touches the demand for gold. As a rule the evolution of these various media of exchange has saved gold from being used as a medium, and, as transactions have increased, has relieved it *pro tanto* of demand. The influence upon prices of the quantity of the "circulation," when that word means media of exchange, therefore, is referable to the class of forces affecting the demand for the standard commodity. That is, devices which save the use of gold tend to keep prices up, because they protect it from a demand which otherwise would have worked to increase the value of gold and thus lowered prices. This is a very different thing from saying that an increase of various media of exchange is an increase of purchasing power, and causes a rise of prices, on the ground that forms of money

are necessarily a demand for goods. In my judgment this last is erroneous. Demand for gold, or the standard, is but one of several sets of forces which influence the level of prices, or the value of "money." Yet it must be remembered, while sharply distinguishing between the function as a standard and that as a medium of exchange, the same article chosen as the standard, like gold, may also be used as a medium of exchange. Although, as in the case of gold, this last use may not be extensive, still the principles of price in operation are acting upon that part of the money in question which serves as a standard differently from their action on that part which serves as a medium of exchange.

§ 3. Obviously the supply of the standard commodity must be one force affecting its value, and thereby the level of prices. Yet the operation of supply on the value of an imperishable commodity, like gold or silver, is not the same in different epochs. To change its value the new supply must be large relatively to the total stock; but as production goes on the total stock begins to assume an amount quite out of proportion to the new supplies from year to year. Thus, in the course of time, changes in the annual product—certainly if we have gold in mind—have less and less practical effect upon the value of the standard and hence upon prices.

The supply, of course, cannot be considered by it-

self; it must be taken in connection with demand. As we all know, an increased or diminished demand becomes effective on the value provided the stock is of such quantity that the force of demand is appreciable on the total stock. If, then, the existing stock is very great, the effect of ordinary changes in demand, or even some considerable increase in demand, could produce little modification in the value of the world's total supply. Hence, variations in the level of prices due to the fluctuations in demand for a standard, like gold, would also be very gradual and it would be a long time before the results on general prices would be evident.

§ 4. A frequent error in past discussions of prices has arisen from a careless neglect of the pivotal and elementary nature of price. The price of any one article, as we have agreed, is the quantity of the standard for which it will exchange. We are studying a case of exchange value; and the price obviously can be modified by anything which raises or lowers the exchange ratio of goods to the standard. If the standard were supposed to be constant, any one knows that changes of price could be brought about by changes in the expenses of production of goods. Put a tax on goods and it is expected in general that their prices will rise; introduce wonderful new inventions which save labor, and without question the price of the goods thus affected will fall. In neither case is it possible

to refer the change in prices to changes in the demand and supply of "money" (however it may be defined). In reality, since price is the ratio of exchange between goods and a metallic standard, like gold, and since the enormous production of gold has created a very great total stock, any sudden or extreme fluctuations in prices, in any few years, could not be assigned to causes operating on the money standard, but to those operating on goods themselves. Hence the active causes working on the level of prices in the real world of to-day are not to be sought by confining ourselves wholly to the one side of "money" in the exchange ratio. The general level of prices is the resultant of the two sets of forces acting both on the standard and on goods in general. The definite outcome can be known only after an examination of the relative strength of the various counteracting, or assisting, forces on both sides of the ratio. For instance, since 1880 there has been an unexampled progress of the arts, which has reduced the outlay in producing nearly every article of our daily consumption. In the same time there has been an unparalleled gain in the yield of gold. The total stock of gold has been nearly trebled since 1875. There has been some increased demand from countries adopting a gold standard, but in no proportion to the increased supply. At the beginning of this century only about one-half of the total stock of gold has been actually used in the currencies of the world. Therefore, gold ought to have fallen

in value and prices have risen. Relatively to a day's labor it has fallen; that is, a day's labor exchanges for more gold than ever before. On the other hand, the marvellous achievements of invention and discovery, have in general lowered the cost of obtaining a given unit of goods (*i. e.*, a yard, a ton, etc.) in such a phenomenal way that in the race for cheapness of production goods have outstripped gold. This outcome is the resultant of the several forces acting on the general price level since 1875. As compared with prices about 1879, the general level of prices in 1896 was about 20 per cent. lower. And I am confident this fall cannot be ascribed to any scarcity of gold, nor of "money" in any form. The facts may be seen at a glance in Charts I and III.

This analysis of price, and the consequent theory of prices, goes with the insistence upon the fundamental nature of exchange value, and upon the definition of price. Clearly enough, it ignores some preconceptions which many of us have imbibed from all our earlier studies in economics. Sometimes I have been wrongly classed as a rigid Ricardian. Strangely enough for this classification, a correct statement of our monetary theory obliges me to depart from some of the accepted propositions of Ricardo. He has led many followers to put too much emphasis upon the effect of the quantity of money on the level of prices.

At this point let me insist that I do not remove "the quantity of money" from the forces which have

an influence on prices. Full and sufficient emphasis has been given the theoretical effect of an increase in the supply of the standard commodity upon its value, and thus upon prices. Likewise, the effect of changes in the volume of media of exchange upon the value of the standard has been considered. But I am quite aware that some may still believe that the quantity of the media of exchange has a direct effect on prices in other ways, for instance, by being offered for goods as purchasing power; that, with a stationary circulation and increasing transactions, the lack of media of exchange may cause a fall of prices. It is exactly on this point that some explanation of the application of my theory of prices may be permitted.

§ 5. Please remember that in a brief outline of a vast subject like a theory of prices it is not possible to give to each proposition its full discussion and its proper limitations. Yet it is necessary to insist, first of all, upon the idea that the valuation of goods, or the determination of their price in some standard, is as a rule the outcome of conditions antecedent to the formal act of exchange in the market for any form of money. The offer of a certain amount of some media of exchange for goods merely records the antecedent price-making process. The media of exchange come into play after the price-making process, and not as a part of that process. In the main, the media of exchange are a consequence, not a cause,

of the influences determining prices. All the elements touching the acquisition (materials, labor, transportation, etc.) of an article; the intensity and nature of the demand for it from consumers; the influence of monopoly conditions—all these are in constant operation in determining the quantity of gold for which the article will be bought and sold. But demand alone does not determine the price of any freely reproducible article. Anything affecting its expense of production must be taken into account. After these forces have done their work, and a price adjusted by these forces has been fixed in the markets, the goods thus valued, or expressed for convenience in terms of a standard, are actually exchanged (or paid for) by some medium of exchange, which, in these days, is seldom the standard money commodity. The service rendered by the medium of exchange is purely one of convenience. The seller receives for the price, previously agreed upon, some means of payment (notes, checks, drafts, etc.) related to the standard indirectly by some test of solvency not material to the price-making process here under discussion. In most cases, such as selling wheat, or cattle, or wholesale goods, the media of exchange arise out of, and, as a consequence of, securing a discount at a bank based on the actual transaction in goods. In these matters, a medium of exchange is provided by the banks in exact proportion to the sum of the value of the goods bought and sold. As a matter of course, the quantity of the media of exchange

must be drawn for sums equal to the transactions, as expressed in dollars, or in terms of the standard. What should be kept in mind, however, is that in this whole process the "money," *i. e.*, the media of exchange needed to perform the transactions, is not a factor in fixing the price per unit of goods. What buyer or seller of wheat or cattle is influenced in fixing the price of his goods by calculations as to the total supply of money in the country, as compared with the work to be done? That process goes on only in the minds of the theoretical writers on money.

§ 6. Yet to many minds the amount of a man's purchasing power, which he can offer for goods, and which consequently affects the prices of those goods, is the quantity of "money" which he can offer. In this way it is sometimes assumed that the quantity of "money" put into circulation is synonymous with the demand for goods in general; if the quantity of "money" is reduced the demand for goods is reduced, and *vice versa*. Therefore, it is argued, the quantity of money in circulation is a direct factor in fixing the level of prices.

To my mind this is a superficial way of looking at the price-making process. If we hark back to simple, fundamental forces, we ought not to go astray on this matter. In the first place, because all goods and property are conveniently expressed in dollars, or in the gold standard, we are apt to think of money, in-

stead of goods, as the primary factor in trading operations. In the essentials of production and consumption, goods are the primary thing, while money is only a secondary or incidental thing, introduced solely as a convenience and subsidiary to the main operations of satisfying economic wants. In the next place, a man's purchasing power, in any sense in which he can have a vital influence on the prices of things he desires, is measured not by the amount of money he has, but by a certain amount of his wealth; or, to put it more exactly, by that part of his wealth which consists of cash and of immediately salable goods. Since immediately salable goods are always a basis of legitimate discounts, it amounts to saying that a man's purchasing power is limited by the amount of his cash, plus his credit.

When we mention this conception of a theory of "purchasing power," which to some persons forms the demand for goods in general, we are at once introduced into the subject of demand for and supply of goods. In short, what is demand for goods? That ought to be a simple question; but it is not, if demand for goods is made synonymous with the volume of those instruments variously defined as "money." In case of particular demand and supply, a fluctuation in demand may cause a change in the market price of the one commodity in consideration. That is one of the ways by which readjustments of the values of com-

modities relatively to each other may take place.[1] Or an increase in expenses of production, or the operations of monopoly, might change the price irrespective of demand. On the other hand, in the case of a general demand and supply, we all know as an economic commonplace that they are only different ways of looking at the same total mass of goods: an increase in the general supply of goods is obviously an increase in the general demand for goods. Such operations do not act to change the level of prices, or the relation of units of these goods to a standard commodity, such as gold. Ranchman A may go on increasing the number of cattle in his herd, and farmer B may go on increasing the yield of wheat on his lands, but the mere increase of cattle, or of wheat, does not necessarily lower the price of cattle or wheat. To explain a particular price we must also deal with the actual demand for cattle, or wheat—arising from those who have immediately salable goods or cash—as compared with the increasing supply. The demand for cattle from owners of wheat may grow as fast as the supply; and *vice versa*. Our fine-spun theories are often held up by a sharp glance at well-known facts. Since 1880 we have witnessed a prodigious addition to the stock of salable goods in our markets; the total productivity

[1] And a number of changes of this kind in several groups of goods, under a speculative influence, may theoretically lift the level of prices and so change the value of gold; but this would be temporary and due to abnormal conditions.

of our capital and labor has been marvellously increased; and consequently each unit, in the large total output of units of goods has been sold at a lower price than before. These are gold prices, and yet no one can for a moment ascribe such a fall to a scarcity of gold.

At this point, however, reference may be made to some great new production of gold, such as that after 1850, and it may be argued that as a matter of fact this increase in gold caused a rise of prices.[1] But it cannot be assumed without careful proof that this actual change of prices was due to the increased quantity of gold. To do so would require us first to grant the theory which is itself on trial, and to deny the effects of all other forces, some of which were obviously at work, to raise prices. For instance, the extraordinary rise in the price of labor at the time of the gold discoveries would almost alone explain the higher level of prices in the gold-producing districts; while the sudden demand for transportation raised freights and prices to an exceptional extent.

To the claim, however, that an increased produc-

[1] In 1850 and thereafter the new supply of gold was large relatively to the existing stock, and the value of the standard commodity must have fallen, with a consequent effect of a tendency to higher prices, which was doubtless exaggerated by speculation (*cf.* Chart III).

But, since 1896, the unexampled increase in the production of gold has not proportionally influenced prices, owing to the already large accumulations in the total stock. The admitted rise of prices must be due more to conditions affecting the production of goods, such as monopolies, trusts, higher wages for the same or less effort, increase in costs of obtaining materials, taxes, and the like.

tion of gold adds to general purchasing power and so raises the level of prices, let me suggest that the bringing into existence of new wealth of any kind—whether new gold, new wheat, or new cattle—adds likewise to man's purchasing power. Hence, according to this theory, a new supply of wheat, or cattle, ought to raise the general price level, because of increased "purchasing power," just as much as a similar sum of gold. Keeping in mind that we are here concerned only with the idea that "purchasing power" is the form by which prices in general are affected, we may see that increase of wealth in any form ought to increase purchasing power, and thus raise prices; but we all know it does not. Hence there must be something wrong with this way of determining prices. In my judgment the error lies in not seeing that purchasing power is synonymous with goods and not with "money."

§ 7. Probably, when we were discussing the phenomenal increase in the production of goods, it may have occurred to some that the vital thing in lowering prices was passed over; that this vast addition of new goods has made a corresponding increase in the demand for "money" to carry on the new volume of transactions; and that prices must have consequently fallen because "money" has not been sufficiently enlarged in amount.

Before discussing this point, let there be a word as

to the logic employed. If it be shown that transactions have increased—which all admit—and also that prices have fallen, it is not competent to assume that prices have fallen because "money" has not increased in proportion to the transactions. This method of arguing assumes the whole point at issue—the cause of the change in the price level. In order to prove that the amount of money in circulation regulates prices, it is not permissible in the progress of the argument to assume the thing to be proved.

To pass now to the main question—even if we admit that the demand for goods is not synonymous with the volume of the circulation—there is a strong belief that the demand for money, in exchanging goods, is imperative, *sui generis;* and that an increase of transactions must necessarily increase the demand for "money," enhance the value of "money," and thus lower prices. It is exactly in this connection that, in my judgment, the inadequacy of the old reasoning about prices most clearly appears. In a word, this inadequacy is to be found in an untenable assumption about the conditions under which the issues of money are made. In these days it is impossible to start with the old assumption that the quantity of the circulation is capable of monopoly. And yet this is the Ricardian hypothesis. If there were limited sorts of media of exchange, and if these were wholly under control as regards the quantity outstanding, the conclusion which follows might be hypothetically correct;

but it would be quite aside from the facts of to-day.

It is true that the demand for some media of exchange, by which the inconveniences of barter may be obviated, is in a sense imperative. The great mass of modern transactions could not possibly be carried on without the use of some form of a medium of exchange. But in our day there is a wide choice between various media of exchange. Instead of there being only one kind, over which there is a monopoly control by the state, there are many available kinds. In the United States, for instance, should gold be required as a medium, there is free coinage, and a demand for its use would be a demand upon the large existing stock in the world, and not upon the sum actually in use within this country; in a real sense gold is an elastic currency which can be freely imported or exported. But, for the transfer of goods there are also government notes, national bank notes, Federal Reserve notes, bills of exchange, drafts, and the deposit currency of banks. If there is an imperative demand for a medium of exchange, and if it is found that one sort of medium is limited, instead of a persistent demand that will raise the value of that one kind, the need can be satisfied by some other. No exceptional pressure will be brought to bear on the value of one kind until the capabilities of all kinds have been exhausted. Indeed, the final outcome is that in the deposit currency we have a mechanism capable of

expanding its efficiency exactly in proportion to the work to be done. It is this medium of exchange which, in most communities having wholesale transactions, takes up all possible excess of demand which conceivably might fall on the other media. Therefore, instead of there being a demand for a medium of exchange which produces a need so imperative that it can give thereby a special value to a form of money, we must believe that with the growth of legitimate transactions, there is created *ipso facto* a medium by the banks in a proportion exactly corresponding to the new need. This is no new saying, but only an application of a truth long ago expressed by a former president of the American Economic Association, as follows:

"If the United States Government were to pay off every legal tender note, and if every bank-note were to be withdrawn, these changes would produce no real contraction of the currency. With specie thus brought into common use for smaller and every-day transactions, we should, it is true, have a currency far less convenient for its minor uses, and we should no doubt see the use of the deposit and check system thus carried prematurely into classes of transactions and sections of country where the note now meets a popular demand; but, as regards the mass of exchanges from which the business condition of the country at any given time takes its tone, we should find them carried on as now, by a creation of bank credits on whatever scale the needs of the time might require." [1]

[1] C. F. Dunbar, "Deposits as Currency," *Quar. Journ. Econ.*, I, July, 1887, pp. 409–413. Also *Economic Essays* (1904), p. 179.

Nor does it touch the pivotal point of the price question to discuss the effect on prices of changes in the rate of interest. A rise in the rate of interest, as is known to all economists, is a rise in the charge for the use of capital, and does not necessarily involve a corresponding demand for standard money in which prices are expressed. But the essential fallacy in trying to connect the "value of money" with the rate of interest consists in supposing that price, or the exchange value between goods and some standard, can be determined by studying only the forces on the money side of that exchange.

It seems to me obsolete to talk of the offer of goods as the true demand for "money," in any sense that such a demand regulates its value. The need of a medium of exchange requires satisfaction; but the human race has long ago evolved a means of payment, through various devices, which meets this need with very little demand upon the valuable standard itself, and consequently without creating any effects to speak of on the value of gold, and thus on the level of prices. In applying the theory of demand and supply to the price problem, the demand for a medium of exchange is not at all synonymous with a demand for the standard in which prices are expressed. Nor is the supply of "money," which has any direct influence on general prices, the supply of the media of exchange. We may have vast changes in the supply of media of exchange without causing any changes in the price level. If

changes take place in the quantity of such media, as deposit currency, for instance, they indicate only that operations in goods giving rise to these forms of credit, which served instead of gold, have been changing. They are in the main referable to changes in the condition of business, to a rise or fall of the volume of transactions, due to causes quite independent of the quantity of "money" in circulation. The principle of demand and supply as applied to the price question still holds good. On the one side, there is an increase or decrease in the demand for the commodity used as the price standard, as well as an increase or decrease in its supply, to be taken into account. But this is only half the solution. On the other side of the price ratio, there is the increase or decrease in the expenses of production of goods in particular and in general which are to be compared with the standard of prices. These points are essential elements in any theory of prices.

§ 8. In regard to credit, it is to be said not only that it has been very much misunderstood, but that it has been given very little real study. There is to-day no commonly accepted definition of credit: the element of futurity in a credit transaction is generally admitted, but "confidence" is by some regarded as the essential element; and yet "confidence" can play its rôle only because futurity exists in the credit operation.

Nor is there any received opinion as to the real nature and functions of credit. We seem, in the whole field of credit, to be on the frontier of knowledge. In any true sense, the economic end of society is the possession and use of goods which satisfy wants. Credit has been devised as one of many means to aid in accomplishing this end. In its fundamental relations it has to do with goods and their increase. To some, however, it is related only to money. The truth of this concept, to my mind, depends upon our understanding as to the nature of money. If money be only a means to an end, and if it does not alter the elemental principles of value, but aids and cheapens the exchange of goods, then it is easy to understand that a borrower in reality obtains the use of goods, as the purpose of a loan, and that money and credit are but the instruments devised by society for effectually carrying out that purpose. Hence the credit operation, as regards extension or contraction, is primarily based on transactions in goods; its relation to money is a secondary, and incidental, connection. Credit being a transfer of goods involving the return of an equivalent in the future, forms of credit appear only as a consequence of transactions in goods. More transactions, not more money, cause an increase of forms of credit; and, by an interesting process of evolution, forms of credit—especially the deposit currency of banks—act as a medium of exchange, obviating recourse to money. The belief, however, that credit

depends on money, and not on goods, is wide-spread, and much discussion is probably before us on this point.

The relation of credit to the theory of prices is not so clear: some think that all the money, plus all the credit (whatever that may be), are the primary elements working to fix the level of prices; but any one will see at a glance that the forms of credit, such as bills, drafts, etc., arising, for instance, from the movement of the wheat crop, have no effect on the price of that crop—the price having been made antecedent to the creation of the forms of credit which came into existence only because of the actual sales of wheat. Does a farmer wait until he sees how many wheat bills are drawn before fixing the price of his wheat? Evidently not; and this mistaken belief needs thorough criticism.

It is not possible here to introduce in detail the relation of credit to the price level. In speaking of the theory of purchasing power, it was stated that, in a true sense, a man's purchasing power consisted of all his cash, and of all his immediately salable goods; or, of all his cash plus all his credit. The general purchasing power of a community, therefore, directed against all goods, is composed of all the cash, plus all the immediately salable, or bankable goods. This, however, is only a statement of the machinery by which all goods—all supply and all demand—are exchanged against each other. In truth, normal credit, by coin-

ing salable goods into present means of payment, merely sets more goods into circulatory exchange against each other than would be possible without the use of credit. In the end, since only a larger volume of goods are offset against each other, we have a movement of a larger volume of goods at prices previously determined by a price-making process—a process usually finished before the moment when the goods are exchanged for some form of money. With abnormal credit, there may be a temporary and fictitious rise of prices, followed inevitably by a serious decline.[1]

When men speak of "our expansion of credit," they have a very vague and general idea in their minds. The definite and distinct forces at work are covered with darkness; and, when a revulsion of trade comes, the results are accepted as due to some undefined and mysterious force which can only be felt, but not explained. It remains the duty of the economic thinker to outline with scientific exactness the forces uniting in the upward wave of overtrading, and to state with equal definiteness the causes of the receding movement. Principles must be sought for which will explain the differing actualities of each special crisis.

§ 9. The settlement of the theory of prices, or the principles determining the value of money (suitably de-

[1] For a more extended discussion of credit and its relation to prices, *cf.* my *Principles of Money*, chap. 4, and especially p. 112.

fined) has an importance reaching out into the field of the international movements of specie. We cannot properly formulate the methods by which the shifting of specie and goods act upon each other in international trade without having previously reached a definite conclusion upon the theory of prices. Thus the examination of and agreement upon the theory of prices will largely determine the statements made concerning the relation between the shipments of specie and the level of prices within a country.

With the Ricardian formula, derived from the experience of England in the early part of the last century, writers have attempted to solve this problem by using the quantity of money in a country as the force regulating its general level of prices: if gold is exported, prices must fall; if gold is imported, prices must rise. In brief, the originating cause of a change in the general level of prices, so far as international trade is concerned, is the shipment of specie. The movement of goods is a consequence of the change of prices brought about by the addition or subtraction of specie. That is, the quantity theory has been relied upon to solve this highly important and practical problem of money.

The original statement of Ricardo has, of course, been added to and emended; but, in the main, it was intended to show that any one country obtains a part of the world's circulation of specie in the proportion that its trade bears to that of other countries. This

quota of gold, for instance, is retained in a country by influences working automatically on the price level through changes in the quantity of gold within that nation. If gold is withdrawn, prices fall, exports of goods are increased, and in due time the gold begins to return until the country's quota of gold reaches an equilibrium adjusted to the relative demands of other countries. The movement of goods forms the variable in the process which aims at a correction of the quota of gold, whenever the equilibrium has been disturbed. The shipment of gold is the initial cause; the movement of goods is a consequence.

In support of this view—the orthodox view—it is held that gold will flow wherever its exchange value is highest. The flow of gold will cause redundancy in the receiving nation, and thus, because it is cheap, will raise general gold prices there; or, *vice versa*, will lower prices in the countries from which gold is taken. The possession of the proper amount of gold seems to be of the main importance, while commerce is regarded as the means to the end.

This manner of treating the problem, however, reverses the true order of events. The movement of goods is the fundamental thing behind all other phenomena such as the methods of payment; the movement of money is a secondary operation, dependent on the direction and extent of the shipment of goods. Moreover, to say that gold, like other goods, flows where its exchange value is highest, is a truism; the

real question to be settled is, how does the flow of gold take its effect on prices? To say that because it is abundant it raises prices is to assume the whole problem at issue. How does a cheapened mass of gold adjust itself to other goods? What is the price-making process? Are goods priced only by an actual exchange of those goods against the increasing flow of gold? On this point the adherents of the orthodox teaching of Ricardo have offered no light.

In truth, the old-fashioned theory on international price changes needs restatement in vital parts. It will be found that forces affecting the prices of goods, such as demand and supply of those goods, are of primary influence in affecting prices, quite independent of the action of a medium of exchange—which, in fact, chiefly comes into existence as a consequence of the exchange of goods. The movement of specie is not the end of commerce, but specie moves as a consequence of commerce. The monetary changes follow and do not precede the operations in merchandise and securities.

§ 10. Only after the honest student has come to a satisfactory conclusion in regard to the nature of money and credit is he in a position to discuss with profit the pivotal problem of this field—the theory of prices. Perhaps I may be criticised for treating here the present monetary problems from too theoretical a point of view; but in subsequent chapters it is the

purpose to present the question of prices by actual experience of concrete operations. Every practical reformer in the field of money is in fact using some theory of prices, true or false, in all the premises laid down in his propositions. One might as well go into practical engineering without a knowledge of thermodynamics as to discuss practical monetary schemes without first settling basic monetary principles. But, unfortunately, the thinking, even among so-called economists, is to-day unsettled on so pivotal a question as the theory of prices. Practical monetary legislation, in more than one country, would be radically modified, accordingly as the so-called "quantity theory" of money is accepted or not. In my humble opinion, that theory is indefensible and erroneous; and yet our great politicians in the United States, in their fencing on the monetary problem, have decided that the question of the gold standard has been definitively disposed of, because of the large recent production of gold. The partisans of gold have thus accepted the principle on which the demands for an extension of the circulation of silver and greenbacks have been based in the past; and the position is absolutely untenable.

The issues thus arising are unmistakable; and they must be thrashed out to a conclusion before any practical applications can be attempted. These issues may be briefly stated in the following heads:

1. Is the price of goods the quantity of some stand-

ard commodity for which they will exchange, or is it the relation between goods and a variety of several media of exchange?

2. If true money is a commodity, like gold, then what determines the exchange value between goods and that commodity? Is the problem in any way different from that of obtaining the exchange value of any two commodities?

3. What is the actual process of evaluation between goods and gold?

4. If demand and supply regulate the value of money (cost of production apart), what is the exact meaning of demand for money, and of supply of money?

5. Is the demand for a money metal only the monetary demand? Is the demand for a commodity *as money* something *sui generis?*

6. In the theory of prices, what is meant by "money"? Is it only gold, or gold together with everything, such as deposit currency, which acts as a medium of exchange? In short, what constitutes the supply of money?

7. If prices are influenced by "purchasing power," is that synonymous with the sum of the existing media of exchange, multiplied by their rapidity of circulation? Or, is purchasing power in its ultimate analysis synonymous with the offer of salable goods?

8. Have the expenses of production, or progress in the arts, no influence on the general level of prices? Does supply as well as demand affect prices?

9. What is the effect of credit on general prices?

10. How do fluctuations in bank reserves actually affect general prices? Does the rate of interest, being paid for capital and not for money, have an effect on prices through its effect on loans?

11. By what economic process would a great new supply of gold influence general prices? Only by being directly offered for goods as a medium of exchange?

12. Does the Ricardian reasoning in favor of the quantity theory of prices hold in monetary systems where free coinage of the standard money exists, and where other devices are used as media of exchange? If mints are open, how can the coin differ in value from the bullion of which it is made?

It is safe to say that the thorough discussion of these points, and a satisfactory disposal of them, is necessary to the solution of the central monetary problem, not only of the past, but of the present time. It is one which cannot be blinked. It arises at every step in popular monetary discussions, and the economists have not given it due attention. On the settlement of the theory of prices, of the value of money, a host of minor questions, which have caused endless and fruitless differences of opinion, will disappear. The solution of this matter of theory is of the greatest practical import; it is as important to practical monetary action as is a theory of heat to mechanics. Therefore let us not be deterred from a struggle with a fundamental matter of theory by any slighting and

cheap sarcasm about the futility of theoretical and abstract discussions. As well scoff at the mathematics which lies behind physics and astronomy as theoretical.

Nor will it be wise to minimize the differences between the old and new points of view in the theory of prices. It may be said that the quantity of money would have an influence on general prices in any theory. True; but that does not touch the crucial point at issue. The quantity theorists make the process of evaluation between goods and "money" dependent on the actual offer of the medium of exchange and goods for each other; an increase of transactions in goods is an increased demand for money, resulting, unless the quantity of money is increased, in falling prices. It is needless to say that the facts do not warrant these statements.

CHAPTER II

GOLD AND PRICES AFTER 1873[1]

§ 1. The principles regulating prices may now be tested by a study of the movement of prices since 1850. There seem to be three well-defined periods in the movement of prices since that date: one, an upward tendency to about 1873; another of declining prices from 1873 to 1896; and the last, of rising prices since 1896. In this chapter we are concerned with the period of falling prices since 1873. Having presented in the preceding chapter the forces governing prices, we are the better prepared to study these forces at work since 1850.

Much of the difference of opinion as to the significance of recent movements of prices is due to the fact that the value of gold is a ratio which varies with a variation in either of its terms. Whether commodities fall in relation to gold or gold rises in relation to commodities, in either case the value of gold has risen. The same phenomena, therefore, may be due to radically different causes. So that, admitting the fall of prices, it is said, on the one hand, that the rise in the value of gold is due to some cause affecting gold it-

[1] From the *Quarterly Journal of Economics*, April, 1887. This discussion of prices, written long before the present emphasis on the quantity theory, may be of interest for reasons relating to questions of method.

self, such as scarcity; or, on the other hand, it is claimed that the fall in prices is due to causes connected solely with commodities, and not with gold.

The believers in the scarcity value of gold in this period substantiate their position by reference to the falling off in the annual production of gold; the unusual demands for gold since 1873 by Germany, Italy, and the United States; stringencies in the money market; the increased use of gold in the arts; the claim that the fall of prices is general; the exceptional character of the depression of trade since 1873; the general existence of low wages, profits, and rents; and the absence of any progress since 1873 in the means of economizing gold and silver. These opinions have been prominently associated with Mr. Robert Giffen,[1] the statistician of the English Board of Trade, and Mr. Goschen,[2] then chancellor of the exchequer; while the evident connection of the main proposition with bimetallism gave it a semipolitical character, and many supporters in both Europe and America.

§ 2. Inasmuch as the rise in the value of gold since 1873 is in proportion to the fall of prices, it is a matter of some importance to look critically at the facts in regard to prices. With this object in view, the more important tables of prices since 1850 have been collected with explanations as to the methods of compu-

[1] *Journal of the Statistical Society* (London), March, 1879.
[2] *Journal of the Institute of Bankers*, April 18, 1883.

tation, sources, and reliability. It is hoped that a comparison of the diverse methods and results of these tables will serve a useful purpose.[1]

Hitherto, the figures of the London *Economist* for twenty-two articles have been almost universally used as evidence in regard to the movement of prices; but it is time that the worship of this fetich should cease. Of late, much more trustworthy tables have been published.

In Chart I a comparison is presented of the prices in Great Britain, Germany, and France. The untrustworthiness of the *Economist* table as a basis for inferences in regard to causes affecting the whole world will be seen at a glance in the years 1862–67. The table of Mr. Sauerbeck, however, which gives the prices of thirty-eight articles, but all of raw produce, furnishes a somewhat better view of the movement of English prices to the present day. The French prices[2] show a less rise to 1873 and a less fall since 1873 than the English figures, which accords with what we know as to the exemption of France from the violence of the crisis of 1873. The table of American prices published by Burchard cannot be depended upon, and is not used. The Hamburg prices, published by Dr. Soetbeer, in the second edition of his *Materialien* (1886), furnish the most satisfactory, accurate, and

[1] See my *Principles of Money*, pp. 171–224.

[2] The number 100 in this table corresponds on the chart to 123.6 of Soetbeer's table, which is the average of the latter's numbers for 1865–69 (the years used as a basis in the French prices).

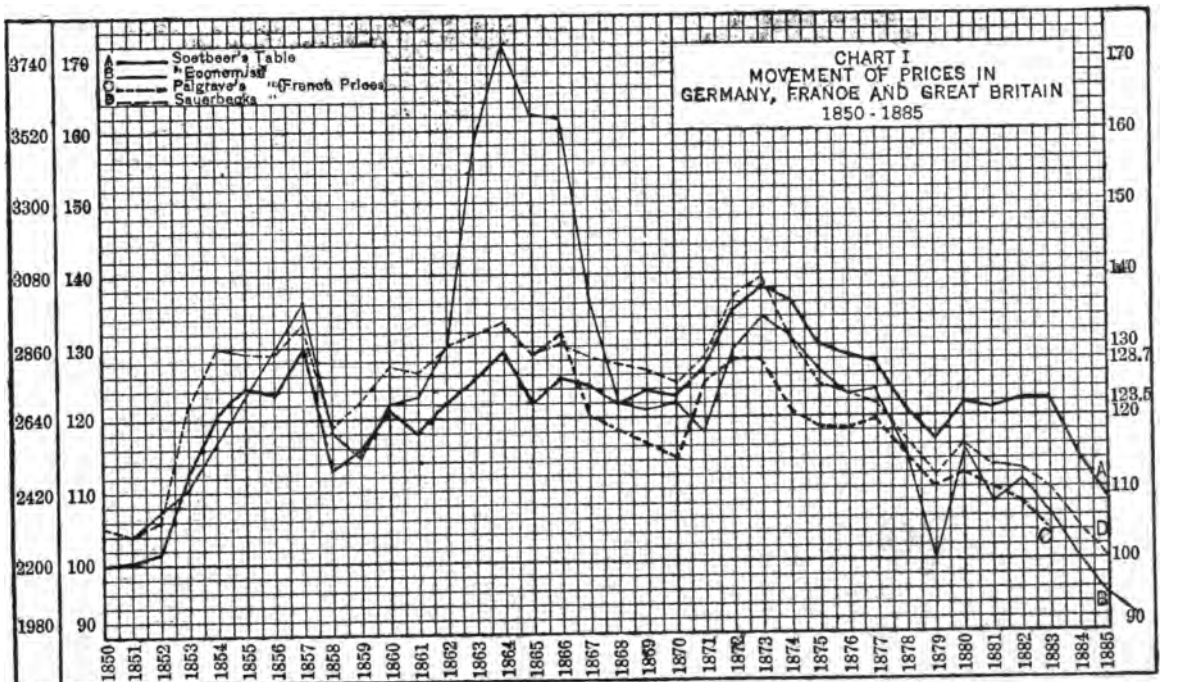
CHART I
MOVEMENT OF PRICES IN
GERMANY, FRANCE AND GREAT BRITAIN
1850 - 1885
Soetbeer's Table
Economist
Palgrave's
Sauerbeck
French Prices
3740
3520
3300
3080
2860
2640
2420
2200
1980
170
160
150
140
130
120
110
100
90
128.7
123.5
1850
1851
1852
1853
1854
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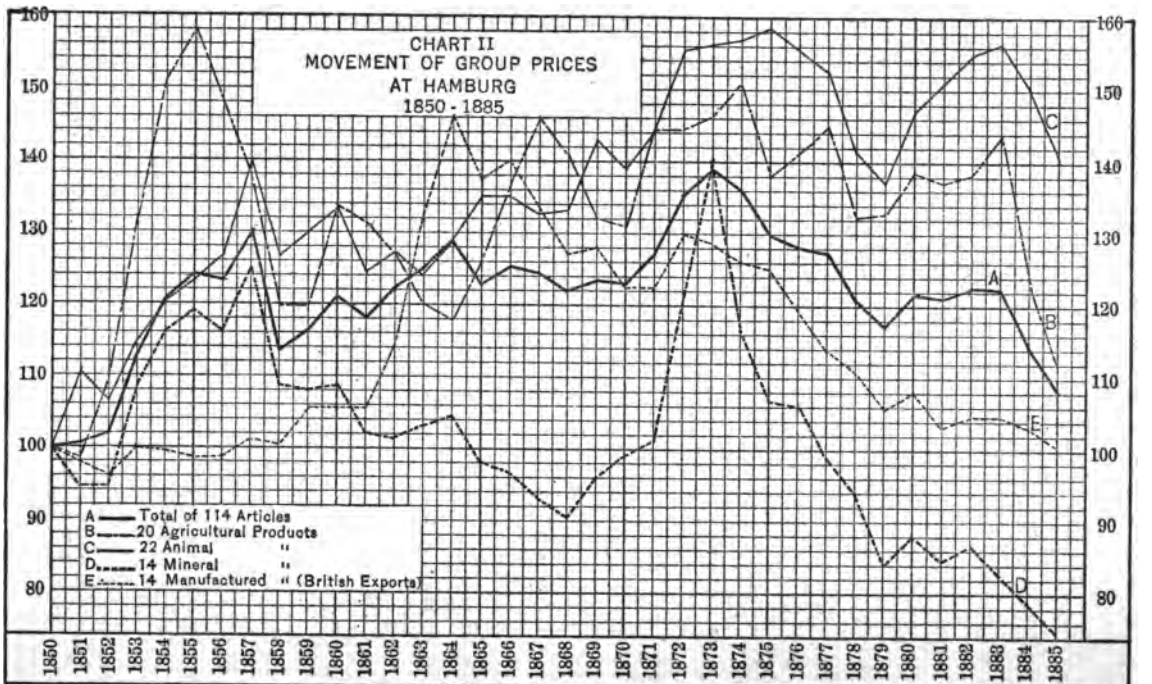
CHART II
MOVEMENT OF GROUP PRICES
AT HAMBURG
1850 - 1885
A —— Total of 114 Articles
B ——— 20 Agricultural Products
C —— 22 Animal "
D ——— 14 Mineral "
E ——— 14 Manufactured " (British Exports)
160
150
140
130
120
110
100
90
80
1850
1851
1852
1853
1854
1855
1856
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1884
1885

complete collection of prices then made. It will be seen that, while Sauerbeck's English figures[1] show a greater fall since 1873 than the Hamburg prices, they do not fall so low in 1885 as the *Economist* prices. The very important fact to be observed, however, from the Hamburg table is that prices in 1885 were still 10 per cent. higher than they were before the discoveries of gold (1847–50); and it is significant that prices seem to have fallen less as we go to tables which include a greater number of articles. There is thus a difference of about 30 per cent. in the results of the Hamburg and *Economist* tables, much to the discredit of the latter; in fact, the *Economist* table is not of a kind to be compared with the other.

The separation of the movements of prices in special groups of commodities in the Hamburg tables, as presented in Chart II, shows a striking divergence in the prices of agricultural, animal, mineral, and manufactured products. The eye is at once struck with the great rise in the prices of animal and agricultural products since 1850; while there has been the expected fall in the case of manufactured goods, accompanied by a surprising fall in the prices of mineral products.

Among other illustrations[2] of economic principles to be seen in these charts, there is one which Englishmen

[1] The standard 100 in Sauerbeck's table represents the average of the years 1866–77, which corresponds on the chart to 128.7 of Soetbeer's table.

[2] A verification is given of the principles laid down by Mr. Cairnes, *Leading Principles*, pp. 117–146, on derivative laws of value.

may well consider. It seems possible that English prices have fallen since 1873 more than prices in other countries. If so, may this not be attributed to a re-adjustment of the equation of International Demand, due to a lessened demand in other countries for England's products compared with England's demand for the products of other countries? Many complaints have been heard in England of the increasing competition of Germany, France, and the United States in foreign markets; for only since the war of 1870 have Germany and France given full play to their modern industrial spirit.[1] In fact, evidences are multiplying to the effect that the demand for English goods has not grown in a sufficiently gratifying manner. However this may be, it is much more likely that English goods, being largely manufactured products, have been affected more than other commodities by the force of improvements and inventions which have lowered prices. (See Chart II.) If these explanations be given full weight, it may suggest that other causes than the scarcity of gold are at work to bring about a fall of English prices. Too often, the reasoning on this subject takes for granted that what is true of Great Britain is true of all the rest of the world. It will not by any means be admitted that a lower range of prices, when once reached, has prevented prosperity[2] in other countries.

[1] *Cf.* Fowler, *Appreciation of Gold*, p. 34.

[2] The clearings in the United States for October 1, 1886, were one-fourth larger than for October 1, 1885, at the lower range of prices.

§ 3. Granting a fall in prices during about fifteen years since 1873 of 20 per cent., yet it will not be possible to reason directly from a fall of prices to a scarcity of gold. But this is the import of Laveleye's argument[1] in answering Mulhall—who had gone to quite as great an extreme in the opposite direction, and had denied[2] any connection whatever between prices and the quantity of the precious metals—for Laveleye even classes Mill among the believers in what the Germans call the *Quantitäts-Theorie*, by quoting his words:[3] "The value of money depends, *cæteris paribus*, on its quantity, together with its rapidity of circulation. . . . An increase of the quantity of money raises prices, and a diminution lowers them. This is the most elementary proposition in the theory of currency, and without it we should have no key to any of the others." In his final statement, however, Mill plainly says (book III, chap. XI, § 3): "In a state of commerce in which much credit is habitually given, general prices at any moment depend much more upon the state of credit than upon the quantity of money." The devices for economizing money which the progress of society has developed render it impos-

[1] *Contemporary Review*, May, 1886, p. 632.

[2] *History of Prices since the Year* 1850, pp. 138, 139; and *Contemporary Review*, August, 1885.

[3] Laveleye strangely omits the succeeding sentence: "In any state of things, however, except the simple and primitive one which we have supposed, the proposition is only true, other things being the same; and what those other things are which must be the same we are not yet ready to pronounce" (book III, chap. VIII, § 4). In his final conclusion, quoted above by me, he pronounces what they are.

sible to say that prices depend directly upon the quantity of money.[1]

Credit in its full development is quite modern, and its relation to prices is not always carefully defined. Mill,[2] for example, prefaced his discussion of the effect of credit on prices by the remark: "It is not, however, with ultimate or average, but with immediate and temporary, prices that we are now concerned." Now there is no conceivable moment but that of a total stoppage of trade when credit is not in active operation; and as credit is purchasing power of a highly efficient kind, often preferable to actual coin, it must be regarded as affecting prices not temporarily, but always, with greater or less force. At some periods it may be more actively used than at others.[3] In

[1] Frewen, *Nineteenth Century*, October, 1885, p. 595, carries the error still further by claiming that prices change with the *production* of gold. One cannot assign much weight to Mr. Frewen, when he declares that capital is spent rather than accumulated in the United States, because of the heavy taxation (p. 601)! Dr. Soetbeer, *Materialien*, p. 81, reminds us that both Huskisson and Jacob attributed the depression which prevailed in Europe after 1815 to a scarcity of the precious metals. He also mentions an interesting book by J. Helfferich, published in 1843, which combated the *Quantitäts-Theorie*, and explained that credit can separate the function of a medium of exchange from that of a measure of value, and can serve as the former without affecting the latter. Most German bimetallists (excepting Dr. Arendt) agree with Messrs. Giffen and Goschen in attributing the fall in prices and the depression of trade to the scarcity of gold. But, on the other hand, Bourne, *Journal of Statistical Society*, June, 1879, p. 417, who denies the scarcity of gold, claims, with Mulhall, that the quantity of gold had no relation to prices.

[2] Book III, chap. XII, § 1.

[3] Between 1833 and 1839 prices rose 22½ per cent., and between 1839 and 1844 fell 44 per cent.; and "this great oscillation," Jevons asserted, "was entirely due to the general expansion of trade and credit, and to its subsequent collapse." *Contemporary Review*, May, 1881, p. 752. Again, in 1857, at a time when the mines were yielding unprecedented quantities of gold, a collapse of credit produced a fall in prices of fully 15 per cent.

truth, looking only at the money side of the price ratio, the general level of prices for considerable periods (sufficiently long to permit the effect of changes in the business habits of the community, or changes in the existing stock of gold, to be felt) must, from Mill's point of view, depend upon a combination of the quantity of money with the various forms of credit. The two are inextricably bound together. So, therefore, the level of prices (so far as it is affected by the offer of a medium of exchange) depends on the expansion or contraction of two factors, quantity of money and credit, each of which may change to a considerable extent independently of each other. Both may increase or diminish together, or the gain of one may offset the loss of the other. A great collapse of credit, for example, without any change whatever in the quantity of the precious metals, might lower the general level of prices; and, if this demoralization of confidence was sufficient to alter existing conditions of mind in the commercial classes, it would produce an effect over a considerable period of time. On the other hand, a period within which there occurred not only an enormous increase in the quantity of the metals used for money, but also an unusual expansion of credit, other things being equal, might show an advance of prices quite out of the natural order of things. Such a period was that from 1850 to 1873, if viewed from the theory that prices are affected solely from the side of money in the price ratio.

§ 4. The series of events which led to the expansion of trade and the collapse in 1873 were unprecedented in their magnitude. The greatest production from the mines which the world had then seen was pouring gold into the channels of trade. In spite of the expansion of commerce and the absorption of gold by France, the new gold may have affected prices. But this set in motion other forces which had an effect on prices. The gold discoveries themselves created a spirit of adventure, and stimulated high hopes of gain in unusual ways. Then, too, a period of rising prices breeds speculation. The figures of home and foreign trade were swelled by the higher range of prices, and added to the buoyant feeling under the inspiration of which new enterprises were eagerly entered upon. The Crimean War and the extraordinary rise of agricultural products (see Chart II) aided the movement, which received but a partial check in the panic of 1857. The war in Italy of 1859 was followed by the Civil War in the United States in 1861. The latter produced a great rise in the prices of cotton, tobacco, and breadstuffs[1] in Europe; and the issue of inconvertible paper drove gold out of our country. Then Italy[2] also gave up her specie after 1865. The war between Prussia and Austria added to the abnormal extension of trade, which in 1866 again received only a partial

[1] This is seen in the *Economist* figures, in Chart I.

[2] The writer in the *Edinburgh Review* for July, 1886, p. 34, estimates the addition of gold to Europe from the United States and Italy as about $500,000,000.

check. The years from 1867 to 1873 in the United States witnessed an unlimited expansion of extravagance and overtrading, such as has been seldom equalled, accompanied by excessive railway building. Our imports were out of all proportion to our ability to pay for them.[1] In this period, also, came the Franco-German War of 1870, and the distribution of the indemnity of war by Germany. The extraordinary and exceptional demand for commodities in periods of war, at the very time of the great destruction of wealth, produced an unhealthy state of affairs; but on the outside all seemed fair, and men had begun to believe that prices were fated always to rise. The speculation in metals (see Chart II) in 1873 was of an unparalleled kind.[2] Nothing, in fact, marks this period from 1850 to 1873 (as compared with the period from 1873 to 1886) more distinctly than the extreme variations in the rate of discount at the great banks of Europe. There were all the evidences of an unhealthy and abnormal condition of affairs. But the unchecked demand, when the actual power to buy had been greatly impaired, could not go on forever. When it was once found that men had been creating liabilities beyond their means to meet them, the end had come. The crisis of 1873 was the painful return to a consciousness of the real situation, after a prolonged fever of speculation for nearly twenty years, which had spread over many countries. The effects were the more seri-

[1] *Cf.* Cairnes, *Leading Principles*, pp. 364-372.
[2] See Leroy-Beaulieu, *Revue des Deux Mondes*, May, 1886, p. 393.

ous because the disease had got such great headway. The period since 1873, on the other hand, is stamped by a radical change in methods of business; and a new epoch in production practically dates from that year. The peculiar changes in the organization of industry will themselves sufficiently explain any exceptional characteristics of that period.

Those commodities, moreover, for which the demand in the period of overtrading had been most extended (and which were of a character capable of rapid production) would be the ones in regard to which, after the collapse, there would be the greatest difference between the power of production and the now lessened demand based on normal wants. Demand and supply had been thrown out of their reciprocal adjustment. Just as when a large scaffold, erected by fitting one timber or board to another, is levelled to the ground by a tornado, exactly the same structure can never again be reconstructed out of the old materials—for reciprocal parts are wanting—so, after a serious commercial disaster, like that of 1873, producers must make entirely new estimates as to the extent of demand, and supply must be adjusted to new conditions. In this way, a great derangement of trade and credit will produce unequal effects on different commodities.

§ 5. To support the claim that we were forced to deal with practically new conditions of production, no facts of the industrial situation since 1873 can be ad-

duced which are more convincing than those relating to improvements and new sources of supply. The period following a great financial upheaval is naturally crowded with improvements in processes and in methods of lowering the cost of production. Necessity becomes the mother of invention. The extent to which producers have been driven by the fierce competition since 1873 to cheapen production leads to the inquiry how far the fall of prices can be accounted for by influences connected solely with commodities, and not with gold. If these influences have been widely extended, it will be strong evidence that the scarcity of gold has had less effect than some suppose.

In order to take a definite point of departure, I shall select from Mr. Goschen's list of articles[1] twenty-three which have fallen in price, and see whether the fall can be accounted for by conditions affecting each commodity itself. (See table on opposite page.)

Taking these commodities in the order given, we find the fall in price of sugar was due to the revolution in production since 1873 stimulated by the bounties on beet-sugar in France, Germany, and Russia. The sugar of the West Indies was thus deprived of the vast

[1] *Journal of Institute of Bankers*, May, 1883, pp. 277–279. These commodities, be it observed, are practically the same as those given by Mr. Giffen (see *Journal Statist. Soc.*, 1879, p. 61, and *Contemporary Review*, June, 1885) to show the effects of a scarcity of gold in lowering prices. I have omitted from Mr. Goschen's table only cocoa, rice, indigo, cotton, hides, jute, and hewn timber; of which cocoa, cotton, and hides have practically not fallen at all; rice and jute are affected by the fall of silver, while indigo and timber are subject to peculiar fluctuations.

	1873			1883		
	£	s.	d.	£	s.	d.
Sugar, brown....cwt.		16	6		12	0
" West Indian.... "		29	0		20	0
Tea, congou.... lb.			11½		5	0
Coffee, Ceylon....cwt.		87	0		70	0
Wheat.... qr.	2	16	0	2	6	0
Pepper.... lb.			7			5½
Iron, Scotch pig.... ton	6	7	0	2	9	0
Lead, English.... "	21	10	0	13	15	0
Copper.... "	91	0	0	65	0	0
Tin, foreign.... "	142	0	0	93	0	0
Wool, English.... lb.		2	3			10¾
" mohair.... "		3	3		1	8½
" Australian.... "		2	0		1	10
" alpaca.... "		2	9		1	3
Cochineal.... "		2	5			10
Nitrate of soda....cwt.		16	6		12	0
Saltpetre.... "	1	10	6		19	0
Coals.... ton	1	10	0		18	0
Paper.... "	3	0	9	1	16	3
Staves....load	10	0	0	5	0	
Mahogany.... "	11	12	0	9	5	
Railway-carriages....	111	10	0	85	0	
Boots and shoes....doz.	3	4	9	2	17	2

European market. The supply was increased in this way without any connection whatever with the demand. From 1877 to 1882, the product of cane-sugar increased 33 per cent., and that of beet-sugar 40 per cent.[1]

Tea had fallen in price, owing to the great increase of production in Japan, which rose to 45,000,000

[1] Leroy-Beaulieu, *Revue des Deux Mondes*, May, 1886, p. 398. According to Fowler, *Appreciation of Gold*, p. 23, the price of sugar in 1830 was £50 per ton; in 1840, £40; in 1880, £25; in 1886, £16. He finds, *Contemporary Review*, April, 1885, p. 539, the imports of unrefined sugar from Germany into England in 1884 were seven and three-fourths million hundredweights as compared with four and one-half million hundredweights in 1882.

pounds, to the enormous extension of tea cultivation in India, and to the addition of large supplies from Java and Ceylon; while, unlike coffee, the consumption of tea has not increased in proportion to the increased production.[1]

Coffee had not fallen in price to the extent shown in Mr. Goschen's table. The average price at Hamburg in 1866–70 was expressed by 142; in 1876–80, by 207; and in 1881–85, by 139. Although the total production has increased,[2] the variations in the seasons cause violent fluctuations. The fall in the price of Brazilian coffee is accounted for by the extension of railways into the interior, which has dispensed with the carriage of coffee on mules to the seaports.

A fall in the prices of wheat and agricultural products seems to strengthen Mr. Goschen's argument, for commodities affected by the law of diminishing returns have a tendency to increase in price. A fall in the prices of such articles, therefore, might suggest a general cause, like the scarcity of gold. But at no time for centuries have there been in operation stronger forces to oppose this law than in this period. The tremendous gains in cheaper transportation have, as never be-

[1] Tea is also bought with silver in the East, and, like jute, its gold price has fallen; while the lowered freights have also had a serious influence. The exports of tea from India had quadrupled since 1873. See Sauerbeck, *ibid.*, p. 23.

[2] Leroy-Beaulieu, *ibid.*, gives the production as follows: 1855, 321,000,000 tons; 1865, 422,000,000; 1875, 505,000,000; 1881, 588,000,000. The deliveries of Rio coffee in New York in 1873 were 68,863 tons, but in 1886 189,319 tons.

fore, opened up new and superior wheat-growing soils,[1] so that the "margin of cultivation" for Europe is now found in the rich soils of India and the United States. The effect of this has been, irrespective of freight, to raise the margin of cultivation for Europe. It is only strange that the price of wheat has not fallen more seriously. Improved methods of farming, moreover, have enabled each acre to produce more than in 1870. Even in Europe, Leroy-Beaulieu thinks that, in the twenty-five years since 1860, food has increased faster than population.

Pepper had not fallen, but risen, in price since 1873. For 1871–75 the average prices at Hamburg are expressed by 229.7, but for 1881–85 by 233.8.

The introduction of improvements in the iron industry since 1873 shows the tendency to adopt new devices in a time of financial depression.[2] When a business is profitable, there is no reason for stopping at a great loss each day to introduce better processes. In a time of depression, a stoppage is no loss. The cost of production of the coal, ore, and lime which

[1] The United States in 1870 had 88,000,000 acres planted with wheat, which was increased to 157,000,000 acres in 1884. India, moreover, increased her acreage from 18,000,000 in 1870 to 25,000,000 in 1884; while Europe planted 440,000,000 in 1870 and 482,000,000 in 1884. Leroy-Beaulieu, *ibid.*, p. 396. Neumann-Spallert, *Uebersichten der Weltwirthschaft*, p. 155, states that from 1869 to 1879 the production of cereals in Europe was actually doubled; while the imports of grain in 1869–70 were valued at $409,000,000, and in 1879 at $817,000,000.

[2] A few years after the panic of 1873, a large iron manufacturer, after lamenting the poor prospects in his industry, said: "And yet we were never making so many improvements as now."

enter into the production of pig iron, writes Mr. Joseph D. Weeks, had been lowered by the following agencies:

"The use of steam-drills instead of hand-drills, of coal-cutting machines for the pick of the miner, of compressed air in place of steam, of locomotive and water carriage in place of mules and of human carriage, of dynamite and its associate explosives in place of powder, of lime and water cartridges instead of powder cartridges, of the long-walled system of mining instead of the pillar and room, etc. In the blast-furnaces there have been important changes in the lines of the furnaces—in the methods of blowing and admitting the air, of charging the furnaces, of using the metal without allowing it to become cold, and of improved hoisting apparatus. In the rolling-mill, the improvements are almost without number. Some of them are growths; that is, a little change to-day, another change to-morrow, until in months' or years' time a gradual improvement has taken place, as compared with the years before, that would hardly be believed without making the comparison. I presume that, had I time, I could name at least five hundred improvements, some that have decreased cost and others that have improved quality."

Even in the case of improvements introduced before 1873, it has been only since then that their use has been applied on an extended scale. The manner in which improvements have lowered the price of iron illustrates the characteristics of modern industries in general.

The price of lead had fallen, as is well known, because of the extraordinary amount of it liberated in treating the argentiferous lead ores discovered in Colorado, Montana, Nevada, Utah, and other Western States and Territories. The lead, being produced as secondary to the yield of silver, was sold for what it would bring,[1] regardless of the conditions affecting the mines worked solely for lead.

The effect on prices of a sudden opening of new supplies has never been more marked than in the matter of copper. The discovery in the late seventies of immense deposits in Arizona, Montana, and Spain caused a revolution in this industry. The great yield in the West utterly overwhelmed the Lake Superior combination, which formerly controlled the market in the United States.[2] In the spring of 1882, copper here fell from twenty-two cents per pound in the spring of 1882 to only eleven and a half cents in 1885 solely from the causes named.

Tin had not fallen seriously in price. The average price in 1884 at Hamburg was about the same as for 1866–67. The unusual speculation in metals about 1873 (see Chart II) carried the price of tin higher than it had been for about forty years, so that the quotation for 1873 is 30 per cent. above the ordinary prices.

[1] The white lead corroders west of the Mississippi getting their lead at so low a price, the corroders on the Atlantic seaboard were placed in a very critical position. The prices of paints, also, had thus greatly fallen at that time.

[2] The Anaconda Mine in Montana led in the shipment to Europe of the vast excess of supply, and broke down the price abroad.

Passing this by, however, the downward movement since 1873, so far as it exists, is fully accounted for by the discovery of large deposits of tin in New South Wales, Queensland, and Tasmania.[1]

The great decline in the prices of English wool (the grade known as "Lincoln"), mohair, and alpaca has a curious cause. Before 1874 they were used on a vast scale in the manufacture of stiff, hard, and lustrous fabrics for ladies' wear of which "alpaca" is a type. But, by a sudden freak of fashion, about 1874 these goods were wholly given up; and their place was taken by soft and pliable fabrics made from merino. The change was so marked as practically to destroy the demand for English long combing wools as well as for mohair and alpaca.[2] The price of the fine wools, however, has been affected by the greatly increased product of Australia and South America.[3]

Cochineal gives another illustration of the changes in modern industries. Cochineal, for which an extensive demand formerly existed in dyeing and printing cloths, has been superseded by the aniline dyes, owing to the discovery of coloring materials in hydrocarbons,

[1] See *Mineral Resources of the United States*, 1883–84. I am also indebted for information to Mr. R. W. Raymond, of New York.

[2] Lord Penzance, *Nineteenth Century*, September, 1886, says an English farmer who formerly received £1,400 for his yearly clip then got only £600. For very careful tables of prices of English wools and for information, I was much indebted to Mr. George William Bond and to Mr. John L. Hayes.

[3] Leroy-Beaulieu, *ibid.*, p. 397, finds a close connection between the falling prices of fine wool and the shipments from Australia, the Cape, and La Plata. The number of bales imported in 1864 was 458,000; in 1868, 879,000; in 1877, 1,272,000; in 1885, 1,740,000.

drawn chiefly from coal and petroleum. The yarn was weakened by cochineal, and spinners were glad enough to find that the cheaper aniline dyes gave as brilliant colors without weakening the yarn.

Nitrate of soda and saltpetre fell in price because of the excessive yield from the deposits of Western South America. The exportation of "Chili saltpetre" (nitrate of soda) has of late been larger than the world's consumption.[1] The average price for 1881–85 is about the same as for the years 1874–76. The article, however, is subject to great fluctuations of price.

Coal varies greatly in price from time to time; but about 1873 it underwent an exceptional rise in price in England, while the later production was forced in an unusual way. In twenty years there was an increase of 145 per cent. Apart from the improvements in mining already referred to, iron could be smelted with one-half the coal formerly required, and so required less coal; while the growth of English stock companies stimulated the activity of producers.

The industrial gains of society over nature were especially prominent in the case of paper. A pulp made from the fibre of wood, instead of rags, is used in its manufacture. Not only is the wood-pulp ground by machinery, but it is also prepared by a chemical

[1] Wagner's *Jahresbericht* for 1884 states the facts as follows in metric tons:

	1881	1882	1883
Exports from South America.....	319,000	410,000	530,000
World's consumption.....	286,000	372,000	468,000

process of decomposition. The latter variety is used for the better grades of paper. Of two kinds of book paper which in 1873 were sold at seventeen and fourteen cents per pound in the United States, the price, owing to the new methods, had fallen one-half. The use of pulp, moreover, cheapened the rags which are still partially used. Where the machine-made pulp was used, as in coarser kinds of paper, like newspaper stock, the fall in price was still more marked. Manufacturers, also, were learning how to use these processes to better effect; and the machinery was being steadily improved.

The supply of white-oak staves for the United States, since the Civil War, has been drawn from Arkansas and Tennessee, which have been penetrated by railways. This has made a vast difference in their price; but inferior wood is also used, which would have a similar effect on quotations.

Mahogany has been affected by exceptional influences. The chief supply formerly came from Cuba and San Domingo; but during the rebellion in Cuba, from 1868 to 1878, new sources of supply were sought for in Mexico, where operations were stimulated by the unusually high prices about 1873 due to scarcity. After the close of the rebellion, Cuba again furnished mahogany; and her exportations have since been increasing. This is sufficient to account for the fall in price, apart from the fact that inferior wood affects the quotations.

The fall in the prices of iron and steel, and all materials entering into the manufacture of railroad-cars, together with improvements in the tools and process of manufacture, would, in the United States, have accounted for any decline in the price of cars. The increase of strength, moreover, makes a great difference in the weight to be carried, so that the superiority of the new cars had caused a depreciation in the value of the old ones.[1]

The marked progress of improvements is also seen in the making of boots and shoes. In 1870 the operative was also a skilled shoemaker: now he is known only as an edge-trimmer, an edge-setter, or a laster, because machinery has been introduced which performs a special part of the manufacture. One machine trims the sole, another the heel, another polishes the shoe; another, a beating-out machine, disposes of a whole row of shoes instead of one, as in former days. The buttonholes are now worked by a machine which enables one operative to make five thousand in a day. In the McKay sewing-machine, on which four hundred pairs were sewed in a day, a small arm made two movements to throw one loop of thread over the needle; but, when it occurred to the inventors to cause the arm to throw one loop at each movement, the operative was enabled to sew eight hundred to one thousand

[1] I am indebted for information to Professor (now President) Arthur T. Hadley and to Mr. M. N. Forney, secretary of the Master Car-Builders' Association, New York.

pairs in a day.[1] Such changes are constantly going on, and it is little marvel that shoes are better made and lower in price.

The fall of prices shown by Mr. Goschen can thus, without a question, be explained by causes other than the scarcity of gold. The course of progress, moreover, has gone farther and in more directions than those mentioned by him.[2] Suffice it to conclude with the facts in regard to the lowering of charges for transportation, which affect the prices of a great range of commodities. The average rates of freight for wheat from Chicago to New York[3] had fallen by 1885 to less than 40 per cent. of the rates of 1873, whether we refer to transit by rail or canal. The charges for ocean transportation had fallen quite as much.[4] One

[1] The Goodyear McKay welt-machine sews the welt onto the upper leather, and then sews the outer sole onto the welt, giving practically the advantages of hand-sewed work at a less price.

[2] As illustrations, we may point to the character of the improvements introduced in the making of glass (which led to the labor riots at Charleroi, in Belgium). One new Siemens "tank-furnace" does the work of eight old coal-furnaces, while it requires only four men instead of twenty-eight. Common window-glass has consequently fallen in price one-half. (See Fowler, *Appreciation of Gold*, p. 39.) Again, steel rails can now be made at a less price than iron rails were made a few years ago, owing to well-known inventions. Still, again, in the cotton-mills, spindles which revolved four thousand times in a minute about 1873 now revolve ten thousand times in a minute.

In connection with the great increase of supplies, see a suggestive investigation by Mr. Luke Hansard, in the *Report of the Royal Commission on the Depression of Trade*, Appendix, pp. 405–414.

[3] *United States Bureau of Statistics*, January, 1885.

[4] See *Contemporary Review*, April, 1885, p. 545, where Fowler gives the charges from Calcutta on jute, wheat, linseed, and rape-seed, from 1881 to 1884. See, also, Leroy-Beaulieu, *ibid.*, p. 401; Fowler, *Appreciation of Gold*, pp. 45, 71; *The Public*, December 22, 1881.

of the mechanical triumphs of recent years has been the transformation of the old steamship into the new,[1] which, taken in connection with the improved grain-elevators and various expedients for receiving and discharging cargoes, warranted the statement that a single sailor in 1885 transported two times as much as he did in 1870, three times as much as in 1860, and four times as much as in 1850. The fall in the rates of freight from Calcutta to London would alone account for the fall in price of several articles in Mr. Goschen's list. The tolls and pilotage on the Suez Canal had fallen about one-third since 1873.[2]

The steady extension of the electric telegraph, together with changes in methods of doing business, helped to lower the cost of production of many commodities. The means of instant communication with agents and correspondents in opposite parts of the world wholly obviated the carrying of large stocks of goods, and economized the use of capital like a labor-saving machine. The whole world was thus opened to any dealer, and the middleman was less used than formerly. Producers were brought nearer to consumers.

Of the fall of prices in his table, Mr. Goschen says, "I am bound to say it appears to me that these figures reveal an extraordinary state of things"; and

[1] The improved ship, being a better and cheaper carrying instrument, is itself the cause of the depreciation in value of older ships. In fact, this is the natural result of improvements. This depreciation of capitalized property, owing to improvements, is Mr. Frewen's real difficulty, and is not explained by the scarcity of gold.

[2] Leroy-Beaulieu, *ibid.*, p. 4.

he thinks it is due to the scarcity of gold. It has been shown conclusively, however, that, in every case investigated, a cause peculiar to the commodity has been found, without the need of referring to a general cause connected with gold. The opening of better lands to cultivation, the discovery of richer mineral deposits, the perfection and cheapening of transportation by which all these distant resources have become easily available, the increased mobility of labor and capital in finding out these new resources, the steady and extraordinary development of mechanical and chemical improvements in a great number of industries—these are some of the main causes[1] which had affected the prices of a variety of commodities since 1873.

Laveleye, however, remarks[2] that improvements made even greater progress in the years 1860–70 than they had since then; but that prices in the former period rose from 18 to 20 per cent. Why, then, he urges, can the same cause have produced an opposite effect since 1873? To this, it must be said: If improvements multiplied before 1873, and yet the prices of the commodities affected did not fall, the expected result must have been masked or counteracted by other influences. Surely, no one will contend for a moment that improved processes in particular industries will

[1] Courcelle-Seneuil (*Journal des Économistes*, August, 1886, p. 163) finds that the completion of a period within which productive railways can be built has had an important influence in lowering prices since 1883.

[2] *Contemporary Review*, May, 1886, p. 621.

not lower the value of commodities relatively to gold, if gold has remained unchanged in its conditions of production. This would lead one to suppose that the prices of many articles before 1873 must have shown a fall, had it not been for the vast extension of speculation and overtrading and the influences of the new gold. But, after the inflation and abnormal conditions of the previous period were left behind, the effect of improvements became more clearly apparent. In fact, when one considers that, with all the unparalleled development of cheapening processes since 1850 in almost every industry which ministers to human wants, prices in 1885 were no lower or, by the Hamburg figures, even 10 per cent. above the level of prices in 1847–50, one is penetrated by the conviction that prices are still buoyed up by the high tide of an abundant gold supply. Else why should prices not be much lower than in 1850? "If, under such circumstances," says Cairnes,[1] "prices did not fall, that could only be

[1] "A rise in the price of commodities, if general, implies commonly a fall in the value of money; but, according to the ordinary use of language, alike by economists and in common speech, money would, I apprehend, in certain circumstances, be said to have fallen in value, even though the prices of large classes of commodities remained unaffected. For example, supposing improvements to have been effected in some branch of production, resulting in a diminished cost of the commodity, the value of money remaining the same, prices would fall. If, under such circumstances, prices did not fall, that could only be because money had not remained the same, but had fallen in value. The continuance of prices unaltered would, therefore, under such circumstances, amount to proof of a fall in the value of gold. Now, when, in connection with this consideration, we take account of the fact that over the greater portion of the field of British industry improvement is constantly taking place, it is obvious that the mere movements of prices here, taken without reference to the conditions of production, are no sure criterion of changes in the value of gold."—*Essays*, p. 106.

because money had not remained the same, but had fallen in value." Or it would be more correct to say that the cost of producing gold had fallen; for, if prices are now nearly the same as in 1850, in reality the cost of production of both commodities and gold has fallen, leaving them relatively to each other in very much the same position as in the beginning. When we once fully apprehend the influences of the progress of society on prices, we cannot admit that a fall of prices is connected in any necessary way with a scarcity of gold.

§ 6. The preceding discussion, however, does not account for a general fall in prices. If the fall of prices had been general, it might suggest a single cause affecting all commodities, such as the scarcity of the medium by which goods are exchanged. In fact, it seems to be quite necessary to a theory which explains the fall in prices by the scarcity of gold that the fall should have been universal. And this is so stated. "The most disastrous characteristic," remarked Mr. Giffen,[1] "of the recent fall of prices has been the *descent all round* to a lower range than that of which there had been any previous experience." In the case of English exports and imports, there will be found a

[1] *Contemporary Review*, June, 1885, p. 809. This is the ground taken by Laveleye, *Contemporary Review*, May, 1886, p. 621. Frewen (*Nineteenth Century*, October, 1885, p. 601) says: "Prices have *all fallen* more than 20 per cent. . . . Prices *all round* are falling lower and lower still, because that circulating medium which measures values has diminished."

large collection of commodities which have actually risen in price since 1873, although that was a year of abnormally high prices. Mr. Palgrave[1] points out a rise in price in 1886, as compared with 1881, of six of the articles used in the *Economist* table. Moreover, in the same list, comparing the period before 1875 with that since 1880, sugar, tea, tobacco, butcher's meat, raw silk, and leather had been at times higher in the latter than in the former period.

The Hamburg tables also give additional evidence that prices were not all moving in the same direction. I have collected[2] twenty-one articles, out of the one hundred quoted at Hamburg, which showed an upward tendency, by comparing the average prices of 1881–85 with those of 1871–75. The average of the numbers representing the prices of these twenty-one articles in the period 1871–75 was 164.2, and in 1881–85, 183.8 In the same lists there can be found at least

[1] *Report of the Royal Commission*, 1886, Appendix, p. 330. The articles are Jamaica rum, potatoes, flax, hemp, ashes, and tin (although tin is quoted by Mr. Goschen as showing a great decline in 1883).

[2]	1871–75	1881–85		1871–75	1881–85
Malt	140.7	143.5	Almonds	111.1	127.5
Buckwheat	131.7	135.5	Wine	221.9	284.1
Hops	339.4	355.3	Champagne	121.2	124.5
Veal	153.1	183.9	Cocoa	156.8	230.1
Mutton	135.4	158.1	Pepper	229.7	233.8
Pork	126.7	126.9	Allspice	60.4	72.1
Butter	188.3	191.6	Rum	181.8	199.1
Bristles	201.9	225.9	Ivory	185.0	194.3
Buffalo horns	184.9	235.9	Flax	123.1	128.2
Herring	149.8	165.8	Gum elastic	141.6	157.9
Dried fish	163.3	184.1			

twenty-one articles[1] which had shown a decided tendency to fall in price. The remaining articles do not show a marked movement in either direction. Forsell[2] makes an interesting analysis of the whole one hundred into two groups, classifying those which show a tendency to rise and those which show a tendency to fall. In the first class he includes fifty-one articles, and in the second forty-nine articles, with the following results in averages:

	1847–50	1851–60	1861–70	1871–75	1876–80	1881–85
I.....	100	125.3	130.3	147.1	143.7	146.4
II.....	100	109.7	114.6	121.7	103.7	96.7

Whether to draw inferences as to a scarcity of gold from forty-nine articles, or to infer that gold was abundant, according to the prices of fifty-one articles, is an awkward dilemma for those who think that prices give direct evidence as to the quantity of money. As Forsell remarks, the theory of a scarcity of gold is incompatible with the rise[3] in price of so many commodities.

[1] Wheat, flour, rape-seed oil, linseed-oil, olive-oil, palm-oil, allspice, rice, sago, cochineal, logwood, quicksilver, salt, chalk, silk, wool, potash, pearl-ash, soda, stearine candles, and wax.

[2] *The Appreciation of Gold*, etc., p. 22.

[3] Mr. Giffen (*Journal of Statistical Society*, March, 1879, p. 306) referred to the rise in price of textiles and metals (and their manufactures) in 1861–65, their fall in 1865–68, their rise again in 1868–73, and their fall again in 1873–79; and yet he could not claim that there was any such corresponding changes in the quantity of gold in the world. Such fluctuations drove Mulhall (*Contemporary Review*, August, 1885) to the extreme of asserting the absence of any connection whatever between prices and the quantity of gold. See, also, the irregularity of movement in the prices in Bourne's table, *Journal of Statistical Society*, *ibid.*, pp. 411, 412.

The purchasing power of gold, moreover, has been indicated in other ways, such as the higher prices paid for services, domestic servants, rents for houses, and for a vast number of things which, in their nature, cannot be included in price-lists, but which absorb a large part of every one's expenditure.

§ 7. From the foregoing statements, it must be evident that the connection between prices and the quantity of gold is not so simple as some would have us suppose. But Mr. Goschen and his followers saw reasons, in the direct and visible demands for gold, since silver was demonetized by Germany, to believe that gold[1] must have been scarce enough to cause a general decline in prices.

"Gold to the amount of nearly £200,000,000 has been required for supplying Germany, the United States, and Italy with new gold currencies.[2] This extraordinary demand fell on a diminished supply. The annual production of gold during the first five years

[1] *Journal of Institute of Bankers*, May, 1883, p. 302. Giffen (*Contemporary Review*, June, 1885, p. 815) computed the demand in the previous thirteen years of Germany at £80,000,000, of the United States at £82,000,000 (£34,000,000 for imports less exports and £48,000,000 for home production), and of Italy at £20,000,000.

[2] Laveleye (*Contemporary Review*, May, 1886, p. 625) saw in the coinage by various countries since 1873 a cause for alarm. The coinage of £220,000,000 since that year he stated to be equal to the production of ten years. It is impossible, however, to judge of the demand for gold by the amounts coined, because there are received at the mints foreign and domestic coins, which should not be counted twice; and old plate is also brought to be coined. Mulhall probably overstates the case when he says (*Contemporary Review*, August, 1885) the annual average coinage of the world, 1870–84,

after the discoveries of 1851 averaged nearly £30,000,000. It now amounts to less than £20,000,000. The new demand has been equal to the total supply of ten years. At the same time, we have to reckon with the normal demand for arts and manufactures,[1] while more gold has also been required to meet the wants of an increasing population and an increased balance of transactions in all gold-using countries.

"No evidence is before us to prove that a fresh development of banking expedients has to such an extent further economized the use of gold as to neutralize this normal rate of increase. On the contrary, it is believed that, in England alone, the gold circulation has grown by £20,000,000 in ten years."

Now, if the existing stock of gold in the world, increased as it has been since 1850, has not been capable of meeting the demands specified by Mr. Goschen, in what way would the effects of a scarcity manifest themselves? If the insufficient quantity of gold has lowered prices, the process must have shown itself at some point in the machinery by which commodities

was £14,000,000, of which one-half came from recoinage of old coins. One-fifth of the United States gold coinage in 1885 was from foreign coins and jewellers' bars, plate, etc., to the amount of about $10,000,000. At least, the coinage since 1873 was not a demand additional to that referred to by Mr. Goschen. But, when Laveleye (*ibid.*, pp. 626, 627) referred to the falling off in the coinage of gold and silver since 1879 in England and France as evidence of a scarcity of gold, he forgot that this was, on the very surface, a reason for believing that the coinage was already so plentiful that no more was called for in these countries.

[1] Soetbeer (*Materialien*, p. 38) placed the annual consumption of gold in the arts at 90,000 kilograms, or nearly $60,000,000, and of silver at 515,000 kilograms, or about $21,000,000. An abundance of gold, however, would not affect the demand for plate, etc., by lowering the price of such articles; for the price in gold would not change.

are exchanged. Fortunately, Mr. Giffen[1] gave an explanation as to how he thought this scarcity of gold had made itself felt:

"A sudden pressure on the stock of the precious metals at a given period tends to disturb the money markets of the countries using them, makes money dear, or creates a steady apprehension that it may at any moment become dear, and so, by weakening the speculation in commodities and making it really difficult for merchants and traders to hold the stocks they would otherwise hold, contracts business and assists a fall in prices."

And, later,[2] he asserted that—

"The rate of discount and the interest of money do not depend on the scarcity or abundance of 'money,' using the term in its strict sense, but on the scarcity or abundance of capital relative to the demands of borrowers."

As a consequence, Mr. Giffen, in looking over the years since 1871, has been struck with the succession of stringencies in the money market directly traceable to the difficulty of getting gold. Now, curiously enough, the period before 1873 was more remarkable for these disturbances than was the succeeding period. From 1855 to 1873, the rate at the Bank of England

[1] *Journal of Statistical Society*, June, 1879, p. 49. He claimed, also (*ibid.*, p. 445), that, after a fall in prices due to a scarcity of gold, there was an apparent superabundance of gold, due to the lower range of prices. Or, as Laveleye puts it: "The more rare it [gold] becomes, the more it apparently exceeds the demand" (*Contemporary Review*, May, 1886, p. 631).

[2] *Contemporary Review*, June, 1885, p. 816.

rose beyond 6 per cent. eleven times, and twice to 10 per cent.; at the Bank of France, for the same years, the rate rose above 5 per cent. ten times, and once to 9 per cent.; at the Bank of Germany, it rose six times beyond 6 per cent., and once to 9 per cent. There must have been great difficulty in getting gold before 1873, if we are to judge from the frequency and intensity of the disturbances in the money market. But there is no corresponding evidence as to a scarcity of gold to be drawn from such disturbances since 1873.[1] In fact, in the very machinery of borrowing and lending, where any such change might show itself, there was no evidence whatever of a scarcity of gold.

In order to test this question thoroughly, I compiled[2] the table on page 65, which shows the total note circulation and the amount and character of the specie reserves in all the principal banks of Europe and the United States (000 omitted):

From these figures it will be seen that the reserves in the banks of the civilized world show a very remarkable increase in gold. Although the total note circulation was increased 29 per cent., the gold in the reserves

[1] At the Bank of England, since 1873, the rate has never been higher than 6 per cent. and for only ninety-six days in all, divided between four occasions (in 1874, 1875, 1878, and 1882). At the Bank of France, in the same time, the rate has never risen higher than 5 per cent., and for one hundred and ninety days, divided between three occasions (in 1874, 1881, and 1882). At the Bank of Germany, also, the rate has never risen higher than 6 per cent., and for one hundred and thirty-seven days, divided between four occasions (in 1874, 1875, 1876, and 1882). See *Report of Royal Commission on Depression of Trade*, Appendix, pp. 370–373.

[2] From figures given by Soetbeer, *Materialien*, etc., pp. 58–70. For France, see *Bulletin de Statistique Comparée*, January, 1887, pp. 62, 63.

	1870–1874				1885			
	Reserves			Total note circulation	Reserves			Total note circulation
		Gold	Silver			Gold	Silver	
Banks of the United Kingdom	[1872]	$153,825	....	$198,540		$141,205	....	$186,850
Banks of Australia	[1874]	41,380	....	20,580		65,890	....	28,115
Bank of France	[1869]	131,800	$106,600	274,100		231,483	$217,087	583,610
Banks of Italy	[1870]	15,447	33,695	88,487		56,121	11,203	189,690
National Bank of Belgium	[1870]	4,893	14,230	40,505		13,900	6,540	73,400
Bank of the Netherlands	[1871]	2,109	55,320	62,857		19,161	38,366	76,972
Bank of Austria-Hungary	[1871]	16,651	37,160	119,000		25,902	48,646	136,351
Imperial State Bank of Russia	[1871]	80,361	4,775	429,486		102,207	676	429,860
Imperial Bank of Sweden	[1870]	1,749	4,325	7,327		3,436	777	9,835
Bank of Norway	[1873]	7,058	1,535	11,794		7,169	....	9,287
National Bank of Denmark	[1872]	3,801	6,980	16,877		11,566	846	18,370
National Banks of the United States	[1871]	18,900	....	284,561		158,100	7,900	276,500
Total		$477,974	$264,620	$1,554,114		$836,140	$332,041	$2,018,840

was increased 75 per cent., while the silver was also increased 25 per cent. In 1870–74, the gold reserves amounted to 28 per cent. of the total note circulation, and constituted 64 per cent. of all the specie reserves. In 1885, the gold bore a larger ratio to a larger issue of paper, or 41 per cent. of the total note circulation; and, in spite of unusual accumulations of silver (in the Bank of France, for example), the gold formed 71 per cent. of the specie reserves. This is a very significant showing. What it means, without a shadow of doubt, was that the supply of gold was so abundant that the character and safety of the note circulation had been improved in a signal manner. In 1871–74 there was

$1 of gold for every $3.60 of paper circulation; in 1885 there was $1 of gold for every $2.40.[1]

There are, moreover, strong and substantial reasons for believing, on independent grounds, that gold was abundant instead of scarce. When we compare the total production since 1850 with that since 1492, the result is very striking, and cannot be too strongly emphasized:

	Gold	Silver
1493–1850.....	$3,314,550,000	$7,358,450,000
1851–1885.....	4,452,525,000	2,399,475,000

In the thirty-five years since 1850, one and one-third times as much gold had been produced as in the three hundred and fifty-eight years[2] preceding 1850, while only one-third as much silver had been produced in the same time. And yet we heard a great deal of the phenomenal yield of the silver-mines in those years. What has become of this vast quantity of gold? We are fairly obliged to explain why gold has not fallen in value. It certainly would have fallen, had not its use

[1] In the face of these facts, Frewen's statement (*ibid.*, p. 597) seems a little wide of the mark: "Not only does the note currency diminish as the gold represented by such currency diminishes, but, . . . as gold becomes scarcer and prices tend to fall, so also does the entire system of credit continue to contract." Cernuschi, the very apostle of bimetallism, himself admits that "the fall in prices which is complained of is not due to what has been called a scarcity of gold—a scarcity which is purely imaginary."—London *Economist*, April 24, 1886.

[2] The amount in existence in 1848 is only a matter of conjecture. The estimates vary from $1,000,000,000 to $3,150,000,000.

been extended; and, out of the extraordinary addition to the world's supply, the demands of France, India, Germany, Italy, and the United States have been easily met. The countries of the world were saturated with the new gold.[1] Mr. Goschen spoke of an addition to England's gold circulation in ten years of $100,000,000; while, strangely enough, Mr. Giffen was alarmed because there was no coinage at all in 1881–82! Laveleye, also, was troubled because the coinage in France was diminishing!

But we heard it said constantly that the annual production of gold was falling off, and that its value must rise. Now, this is what Mr. S. Dana Horton[2] calls the "sempiternal object of erroneous reasoning." The value of gold is affected by the total existing supply, which is very large relatively to the annual supply. And yet it was true that the annual production had fallen off from its highest point about 1853. Before 1840, the annual production of gold amounted to about $14,000,000: it rose as high as $157,000,000; but in 1885 it was about $100,000,000. A millionaire, however, does not become poor because his annual increase of wealth is a few thousands less than it was at

[1] Soetbeer (*Materialien*, p. 70) gives the following summary of the amount of gold in the civilized countries by years (in millions of dollars):

1877	1878	1879	1880	1881	1882	1883	1884	1885
722	712	875	947	975	1,017	1,150	1,170	1,260

[2] *Quarterly Journal of Economics*, October, 1885, p. 58. Laveleye and Disraeli are addicted to the "sempiternal" fallacy. (See *Contemporary Review*, May, 1886, p. 623.) Cernuschi, however, remarks, "The power of the gramme of gold is proportionate to the whole of the gold, . . . not to the importance of the annual production" (*Anatomy of Money*, p. 11).

its greatest: his past accumulations are still his, and his yearly income is yet large. The yield from the mines in 1885 was enormous compared with any period previous to 1850, and this had been kept up for thirty-five years. The longer this continues, the less important will be the variations in the annual supply.[1]

§ 8. Even though the gold production from 1850 to 1885 had been great enough to meet very heavy demands; yet it may be asked how far had the means for economizing money developed in that period. Mr. Giffen believed no evidence existed as to an extension of credit devices since 1873, that England and the United States were already fully "banked" before this period, and that the clearing system on the continent showed no progress. The increase in popula-

[1] The annual average production of gold and silver after 1850 is as follows:

Periods	Gold	Silver
1851–55	$139,077,000	$40,096,750
1856–60	140,729,000	41,177,250
1861–65	129,081,000	49,827,000
1866–70	136,035,000	59,924,000
1871–75	121,302,000	86,162,000
1876–80	120,261,000	95,515,500
1881–85	104,025,000	107,190,000

The yield for the single years since 1880 is as follows:

	Gold	Silver
1881	$110,810,000	$98,418,000
1882	103,564,000	105,916,000
1883	100,822,000	108,582,000
1884	101,940,000	110,899,000

Soetbeer, *Materialien*, p. 1.

tion and commodities, he urges, had not only not been compensated for by any economizing expedients, but the increased demand for gold had fallen on a diminishing supply.

To examine, first, whether the issue of notes has saved the use of gold in the principal countries of the world since 1873, it will be necessary to compare the amounts of uncovered paper, not the amounts of the total circulation in the periods taken. To the extent, of course, to which the covered circulation has increased, no extension of credit has taken place. For this purpose, I prepared a table showing the amounts of the total circulation, and the amounts of the total circulation less the specie reserves, in the principal countries for the years 1870–74 and for 1885 (000 omitted):

Countries	1870–74		1885	
	Uncovered by specie	Total circulation	Uncovered by specie	Total circulation
Great Britain[1].....	[1872] $44,719	$216,939	$45,644	$211,139
France[2].....	[1869] 39,739	322,869	135,041	583,610
Italy[3].....	[1870] 168,000	180,000	170,000	285,200
Austria-Hungary[4]..	[1873] 209,678	263,616	188,646	263,194
Germany[5].....	[1871] 135,750	312,649	124,500	299,905
Russia[6].....	[1873] 339,652	475,357	525,000	627,000
United States[7].....	[1871] 505,400	505,400	172,000	814,300
Total.....	$1,442,938	$2,276,830	$1,360,831	$3,084,348

[1] Soetbeer, *Materialien*, p. 59, and Statistical Abstract, 1884.

[2] The mean of the highest and the lowest circulation is given for 1869. See *Bulletin de Statistique Comparée*, III, 21, and London *Economist*, January 23 and December 25, 1869. For 1885, see Soetbeer, *ibid.*, p. 73.

[3] See *Relazione sulla Circolazione Cartacea*, made to the Italian Chamber

From these figures, it will be seen that in 1885, as compared with the years about 1873, the uncovered circulation decreased by $82,000,000, or 5 per cent.; while the total circulation increased by $800,000,000, or 35 per cent. This indicates quite clearly the effects of the great addition to the world's stock of gold and silver since 1873. Specie to the amount of $800,000,000 had gone into circulation in the form of note issues, representing an equivalent amount of specie; but gold had not been economized by the use of credit in the form of notes. While the total circulation of these countries had increased 35 per cent., the paper had been much better protected; for in 1870–74 the specie was but 36 per cent. of the total issues, and in 1885 the specie was 55 per cent. of the total issues. From this table, then, we see where the gold referred to by Mr. Goschen had gone. About $750,000,000 of specie,

of Deputies, March 15, 1875, Appendix, pp. 20, 41; and Haupt, *L'Histoire Monétaire de notre Temps*, p. 274.

[4] See Soetbeer, *ibid.*, pp. 64, 74; and Mülinen, *Finances de l'Autriche*, p. 163.

[5] For 1871, the uncovered circulation is given by Soetbeer, *ibid.*, p. 74. Taking the total circulation of all the German banks (given for 1871, p. 65), and supposing the *Landespapiergeld* to be the same in 1871 as in 1870, I get the total circulation for the year 1871 instead of 1870.

[6] See *Bulletin de Statistique Comparée*, II, 161; Haupt, *ibid.*, p. 366; and Soetbeer, *ibid.*, pp. 66, 75.

[7] For 1871, from the $674,000,000 of United States notes and national bank notes there has been deducted $168,600,000 for notes held by the treasury and the banks. No notes could be presented for specie in 1871. For 1885, from $664,000,000 of United States notes and national bank notes, $134,800,000 was deducted for notes held by the treasury and the banks. The amount of specie which could be drawn on by holders of either kinds of notes, to the amount of $278,400,000 gold and $79,000,000 silver, was also deducted, to ascertain the uncovered note circulation. *Cf. Finance Report*, 1886, I, p. lxxx.

mostly gold, had gone into circulation since 1873, in the form of covered paper issues, in the United States and Italy alone. The paper currency of every country except Russia had gained in security, together with a large increase in many of the countries. The gold supplies had not merely permitted an enlarged note circulation, but had furnished a much better protection to that increased issue.

In regard to the use of checks and clearing-houses in economizing the use of money, Mr. Giffen was probably correct in saying that this system had attained its full growth in the United States and Great Britain before 1873; but an important conclusion is to be drawn from this. Just to the extent to which the system may have been perfected is it one which expands with the expansion of business. In the same proportion that transactions increased, this means of economizing the use of money would (approximately) increase. The clearing system, in fact, is one which grows with the work to be done.[1] Certainly, this is true of wholesale transactions; while in retail trade

[1] How well this is recognized may be seen by the accepted custom of measuring the extent of business by the figures of the clearings. "The returns of the London Clearing-House," says Mr. Palgrave, "may be regarded as indicating approximately the value of the business of the country as indicated by price" (*Report of Royal Commission*, Appendix, p. 330). In the United States, of all the receipts by the 1,966 national banks on one day in 1881, 95 per cent. were made up of forms of credit, exclusive even of circulating notes; while in New York City this percentage was 98.7. At all the banks, only .65 of 1 per cent. of gold was used; and, in New York City, only .27 of 1 per cent. of gold was used. See *Report of the Comptroller of the Currency*, 1881, p. 14. *Cf.* also *Journal Statistical Society*, June, 1865, "Country Clearings."

the use of checks is steadily widening. An elastic system, so far as it is ready to perform exchanges in proportion to their increase, meets the need of more money the moment it appears. If there has been no increase in clearings under such conditions, it only shows that transactions have not increased, not that there is any less efficacy in the system. Where checks are in general use other forms of credit are of less importance.[1]

On the Continent the borrower at a bank will, as a rule, prefer notes instead of the right to draw on a deposit by checks. Yet, even at the Bank of France, 66 per cent. of the transactions in 1877–78 were effected without the use of notes and coin.[2] But, on the other hand, the *Chambre de Compensation*, established in Paris in 1872–73 (including twelve of the large banks), with the help of the Bank of France, performed exchanges[3] the first year to the value of $320,000,000, which in 1883–84 had risen only as high as $843,000,000. Clearing-houses were also established in Austria and Italy in 1872, but they have made little gain. The exchanges at the *Saldirungs-Verein* in Vienna (formed by the four old banks of the Saldosaal of

[1] The use of bills of exchange in Great Britain seems to be falling off, with an increased use of checks. *Cf.* Sauerbeck, *Prices of Commodities*, p. 8.

[2] *Cf. Journal of Statistical Society*, 1884, p. 493. If Mulhall's *Dictionary of Statistics* can be trusted, the banking of the world since 1840 has increased elevenfold—three times faster than commerce, and thirty times faster than population. Leroy-Beaulieu reports that "checks have become everywhere a more common instrument of payment" (*Revue des Deux Mondes*, May, 1886, p. 403).

[3] The figures for the continent are taken from Rauchberg's *Die Entwickelung des Clearing-Verkehres*, in the *Bulletin de l'Institut International de Statistique*, I, p. 140, etc.

1864, together with ten other large banks) were no greater in 1885 than in 1872, being at that time about $200,000,000 a year. The clearings of the *Stanze di Compensazione* in the several cities of Italy show a gain from $129,000,000 in 1883 to $348,000,000 in 1885, with some promise for the future. But, in Germany, a decisive advance was made in 1883, under the leadership of the Reichsbank, in the establishment of clearing-houses in Berlin, Hamburg, Frankfort, Bremen, Cologne, Leipzig, Stuttgart, Breslau, and Dresden. In the year 1884, the exchanges amounted to the large sum of $3,032,000,000. Although not so large as the $30,000,000,000 a year in New York or London, it is a very promising increase in the means of economizing the use of specie on the Continent.

In international trade, also, as Leroy-Beaulieu[1] suggested, it is not necessary that the precious metals should increase as rapidly as commerce expands. The ocean and land telegraph, the shortening of routes by canals, and the extraordinary improvements in the ocean steamships have resulted in economizing the shipments of gold between different countries. A few years ago, twelve or fifteen days were taken up in carrying gold from New York to London; but later six days were sufficient. Formerly, gold was ninety days coming from Australia to England; while only thirty-five days were later required. In this way,

[1] *Revue des Deux Mondes*, May, 1886, p. 402. This is more or less confirmed by Bourne's table (*Journal of Statistical Society*, 1879, p. 411).

gold being a less time in passing from person to person in international transactions, greater rapidity of circulation is assured, with all the effects of an increase in quantity.[1] The use of foreign bills of exchange is as great as ever between bankers in different countries; while there is far greater activity of late not only in the transmission of securities which discharge international liabilities but also in the extended use of international money-orders.[2]

§ 9. To get more light on the question whether gold has risen relatively to all commodities from causes affecting gold itself, it would be profitable to examine into the movement of prices in India;[3] but this cannot be discussed here.

It will be as well to close the present study by re-

[1] Fowler (*Appreciation of Gold*, pp, 12, 13) says of English trade: "The total of our imports and exports from 1866 to 1875 was in round figures £6,000,000,000, and the total of bullion and specie imported and exported was, in the same period, £530,000,000; but the total of our imports and exports from 1876 to 1885 was £6,700,000,000, and this vast amount was moved with the aid of £493,000,000 of bullion and specie. If we take the gold alone, we used about £327,000,000 in the former decade against £278,000,000 in the latter." If we can trust Mulhall, in 1861–70 the amount of the precious metals transported was 12 per cent. of the sea-borne commerce of the world, while in 1871–80 it was only 8 per cent.

[2] In the countries composing the Postal Union in 1885, the issue of international money-orders had risen to $60,000,000, and the issue of domestic money-orders to the surprising amount of $1,821,000,000. See *Statistique Générale du Service Postal*, Berne, 1886. In the United States alone domestic money-orders have increased $80,000,000 since 1873. I am much indebted for information to Mr. C. F. Macdonald, of the Post Office Department.

[3] These prices, so far as then published, can be found in Barbour's *Theory of Bimetallism;* in J. E. O'Conor's *Report on Prices and Wages in India*, 1886, Government of India, Department of Finance and Commerce; and in the *Report of the Royal Commission on Depression of Trade*, Appendix, pp. 331–342, 378–382.

ferring briefly to the argument of the English writers,[1] that a scarcity of gold had brought about a fall in rents, profits, and wages. It will be recalled at once, in regard to rents, that a marked characteristic of the period since 1873 had been the opening up of new and fertile lands, whose products have been transported at a greatly diminished rate. But this in itself is a reason why lands in the older countries should be thrown out of cultivation, and why rents should be lowered. This phenomenon, then, can be accounted for on other grounds than the scarcity of gold.

In attributing the fall in the rate of profits to the general fall of prices (due to a single cause, the scarcity of gold), these writers fall into an error which has been already thoroughly exposed by Mr. Mill,[2] who pointed out that "the fall of price, which if confined to one commodity really does lower the profits of the producer, ceases to have that effect as soon as it extends to all commodities." In some industries, however, owing to changes in relative demand and supply, intense competition had set in after 1873, and producers had necessarily submitted to lowered profits. But, in so far as prices had fallen in all industries alike, that cannot have been the cause of a general fall of profits.

If, however, labor has not fallen in price, while other things have fallen, "what has really taken place," says

[1] Frewen, *ibid.*, p. 599; Giffen, *Journal of Statistical Society*, 1879, p. 57, and *Contemporary Review*, June, 1885, p. 816; the writer in the *Edinburgh Review*, July, 1886, p. 39; and Sauerbeck, *ibid.*, p. 42.

[2] *Principles of Political Economy*, book IV, chap. IV, § 1.

Mr. Mill, in the connection already quoted, "is a rise of wages; and it is that, and not the fall of prices, which has lowered the profits of capital." It is quite certain that there had been no fall of real wages after 1873, while there is good reason to suppose that they had risen.[1] In the United States, money wages may have fallen slightly in some industries; but an allowance must be made for the depreciation of paper previous to 1879. American producers had been enabled to sell at lower prices, and yet pay relatively higher wages, only by a gain in efficiency. As a typical case, the accompanying facts were furnished me by a manufacturer from his own books:

	Average wages per day	Amount paid for a given piece of work
December, 1867	$2.05	$1.00
" 1876	1.71	.78½
" 1886	1.79	.37$\frac{1}{10}$

For Germany, Soetbeer gives a variety of evidence to show the rise of wages[2] since 1873. Money wages in Italy,[3] which were indicated by the number 179 in 1873, were in 1884 expressed by 222. But it is not necessary to cite further evidence on this point. The fact that wages have risen tends to confirm the belief that the fall of prices was due chiefly to the introduction of improvements.

[1] See *Report of Massachusetts Bureau of Labor Statistics* for 1884, and *Report on the Statistics of Wages*, United States Census, 1880, vol. XX.

[2] *Materialien*, pp. 88, 90, 91.

[3] See *Movimento dei Prezzi di Alcuni Generi Alimentari dal* 1862 *al* 1885 (1886), issued by the Italian Department of Agriculture, p. xxvii.

§ 10. In the study of this subject, we have been confronted at the outset with a fall of prices after 1873 which happened to coincide with the demonetization of silver by Germany and the United States, and the beginning of a new epoch in the production of many commodities. To assume that because the fall of prices coincided with the demonetization of silver it was due to an appreciation of gold, without considering whether the coincident phenomena were traceable to entirely distinct causes, is to fall into the fallacy of *post hoc propter hoc.* The forces which fix the level of prices at any time, moreover, are far too complex to admit of the inference that, because prices have fallen seriously, gold has become scarce. On the other hand, all the phenomena presented to show the scarcity of gold are explicable on other grounds.

But—what is of very grave importance—we must admit that great changes in prices may take place irrespective of the scarcity or abundance of the precious metals. From this it follows that, as a standard of payment for contracts, neither gold nor silver, nor even gold and silver (if they should ever be firmly yoked together by international bimetallism), will change so as to correspond to the changes in prices brought about by a variety of causes independent of the quantity of the precious metals. Under such circumstances, the attention given to the question of a proper standard of deferred payments can never be too careful.

CHAPTER III

CHANGES IN PRICES SINCE 1896

§ 1. In the last chapter attention was given to the reasons lying behind the decline of prices after 1873. This decline continued beyond 1885, and reached its lowest point about 1896. In this whole period it was a problem of falling prices and of explaining the causes then at work. A very different task now lies before us in the period since 1896. Here we have to do with rising prices. There is thus an opportunity and a duty to analyze the causes affecting prices in general, and to ascertain why in the early period prices fell, while in the later period they rose. Such a problem is certain to put the theories of price to a practical test.

In order to place before us clearly and briefly the various elements in what is a large question, it seems best to present an analysis in topical form of these elements which influence prices not only in a time of falling, but of rising prices, as follows:

Part I. Prices of Commodities

a. Facts: Movement of Prices, 1890–1915

b. Causes of the Changes in Prices of Commodities:

1) The Increased Production of Gold:

(1) Money in Circulation
- 1. Gold
- 2. Other Forms of Money
  - 1. U. S. Notes
  - 2. Bank-Notes
  - 3. Silver Certificates
  - 4. Silver Coin
  - 5. Checks

(2) Bank Reserves
- 1. Gold
- 2. Other Lawful Money
  - 1. U. S. Notes
  - 2. Silver Certificates
  - 3. Silver Coin

(3) Credit and Prices

2) Changes in Expenses of Production of Goods
- (1) Tariffs and Taxation
- (2) Wages, Unionism

3) Agricultural Conditions
Food, Cotton, etc.

4) Monopolies, "Trusts"

5) General Extravagance

6) Speculation

Part II. Prices of Securities

a. Facts: (1) Prices of Railway and Industrial Securities
(2) Specie Reserves
(3) International Movement of Gold
(4) Ratio of Loans to Deposits

b. Causes of the Changes in Prices of Securities

1) Fall in the Value of Gold
The Volume of Circulation

2) Earnings

3) Speculation
Expanded Credit

4) Overissues

At the beginning, certain ambiguities as to what is to be included in our present examination should be cleared up. Obviously we must include in a complete study not only the changes in the prices of goods but those in the prices of securities. Therefore, as indicated in the outline above, our discussion should break into two parts, one treating of the prices of commodities, and the other of the prices of securities. Although,

in the past, the causes of changes in the prices of goods and securities have been often assumed to be the same, a very casual reflection will show that they are widely different, as may be noted by the causes briefly presented in the outline. A full presentation of all the points raised by this outline would fill many volumes,[1] therefore, while the outline may serve as a map of the field, and of the relations of one point to another, it will also serve as a means of indicating the topics which must here be passed over, and those which have been chosen for examination. It is intended here to present a study only on changes in the prices of commodities; and in this chapter, also, it is the purpose to treat mainly of the effect of gold on the general level of prices, namely:

Part I, b, 1). The Increased Production of Gold

1. The Supply of Gold
   Table of Production, 1890–1915
2. The New Demand for Gold, 1890–1915
3. Effect of Gold on Prices, 1890–1915
   (1) In Circulation as a Medium of Exchange
   (2) In Bank Reserves
   (3) In Expansion of Credit

After having examined into the relation of gold to prices, some attention can then be given to the effect of changes in expenses of producing goods upon prices (*e. g.*, Part I, 2).

[1] In later volumes, for which these collected articles are only preliminary studies, it is hoped to give a full and systematic discussion of all the problems here raised. In a series of volumes on money only that on *The Principles of Money* (1903) has yet been prepared.

§ 2. The other topics under Part I, not given detailed treatment, may be covered in the form of propositions without argument. At the risk of possible repetition, we may thus present a summary of the forces determining prices in general statements:

1. The price of a commodity is measured by the quantity of a given standard for which it will exchange.

2. A change of prices may be due to changes in the conditions affecting the supply (thus including expenses of production) of goods, as well as to changes in the demand for and supply of gold. A statistical statement of a change of price is not a statement of the cause of the change.

3. Probably there is not so much difference of opinion regarding the theory of prices as is sometimes supposed. Other causes being supposed constant, an increased supply of gold would tend to raise prices. No one can fail to see that, if by "money" is meant gold, a change in its quantity would, other things being equal, be a factor affecting prices. An increasing demand for gold, however, would work against the effect of an increasing supply. If the new demand offset the new supply, then, if changes of prices occurred, their cause must be sought in the influences touching the producing and marketing of goods.

4. The effective demand for goods (granting their utility) is limited by the buyer's purchasing power. This purchasing power is not identical with the quantity of the media of exchange in circulation, any more

than the value of the total exchangeable wealth of the community is identical with the value of the total money in circulation. In any event, demand alone does not determine price.

5. The general level of prices is not independent of particular prices; since there can be no such thing as a general level, or average, of prices which is not the resultant of a number of particular prices each arrived at by individual buyers and sellers. The causes of price changes must be sought in the forces settling particular prices. This does not exclude the consideration of any causes affecting the value of the standard in which the prices of goods are expressed, because the standard is itself a particular commodity.

6. In particular cases, competitive prices in this country are arrived at by the higgling of the market, which depends on buyers' and sellers' judgment of the demand and supply of the commodity (*e. g.*, wheat); and, when the price is fixed, the credit medium by which the commodity is passed from seller to buyer comes easily and naturally into existence and, of course, for a sum exactly equalling the price agreed upon, multiplied by the number of units of goods. Price-making generally precedes the demand upon the media of exchange, and does not at all imply any necessary demand at the moment upon the standard in which the prices are expressed (*cf. infra*, 10).

7. The offer of "money" for goods is only a resultant of price-making forces previously at work, and does not measure the demand for goods (*cf. supra*, 6). That is,

the quantity of the actual media of exchange thus brought into use is a result and not a cause of the price-making process. The supposed offer of money has no money as its basis, but is only the offer of a purchasing power, previously existing, based on salable goods, which at the moment of payment appears expressed in terms of the standard. By credit devices the actual transfer of the standard is reduced to an inconsiderable minimum. In reality (as in foreign trade) goods are exchanged against goods.

8. The effect of credit on prices is to be traced mainly through banking facilities by which goods are coined into means of payment, so that, expressed in terms of the standard gold, they may be exchanged against each other. Thus credit devices relieve the standard to an incredibly great degree from the demand for the use of gold as a medium of exchange, and thus remove a demand, as trade increases, which would otherwise have enormously affected the value of gold. Thus the effect of credit on the general level of prices in considerable periods of time is shown by a tendency to reduce the demand on the standard gold, and hence to prevent the tendency toward falling prices.

9. A general proposition is that banks are limited in making loans by the quantity of their capital, a bank of large capital and deposits being able to make large loans, a bank of small capital and deposits, small loans. A second proposition is that the demand for legitimate loans varies with the exchanges of goods and collateral and the opportunities for investment. With an in-

creasing activity in business, however—either sound or speculative—the expansion of loans is limited by the resources of the bank. Next, a bank trying to carry a certain amount of loans, must hold a specified proportion of reserves to demand liabilities under the rule of banking experience or law. The amount of its capital and the funds left with it determine the relative size of its loan item; and the extent of its loans and resultant deposits determine the amount of its reserves. The reserves of a bank are thus a consequence of the loan operations. This conclusion, however, as it affects the practical problem of the present day, is not, in my opinion, invalidated by the conceivable cases arising, when business tends to outrun banking facilities, in which anything that makes increasing reserves possible would increase the power of the banks to lend. When gold becomes increasingly abundant, the banks having large resources get more easily the gold reserves needed for their operations. It still remains true that the fact of an increased supply of gold does not of itself increase loans, unless conditions of business demand an increase in loans. Therefore, the expansion of business is not a necessary consequence of an increasing supply of gold, any more than an expansion of railway traffic is the necessary consequence of an increasing supply of cars. If increasing goods are in existence to be transported, then, of course, there is an increasing demand for cars. Likewise, if there are more transactions in goods. there are more loans,

and there is an increasing demand for that which is lawful reserve. From which it results that the use of new gold in bank reserves, under present conditions, is not the significant causal force which expands business and raises prices (although it may be contemporary with it).

10. The problem of explaining the general level of prices is one of arriving at the adjustment between two terms of a ratio (the standard on the one side, and goods on the other), each of which is influenced by supply and demand. Gold being one, and goods being many, a cause working on gold alone, and important enough to show an appreciable effect, might explain a general movement of prices. In practical operation, however, because of the large existing stock of gold, very considerable additions may take place in the supply of gold without materially changing the world value of gold as related to goods in general. Rapid changes of prices are hence more likely to be due to influences in the market for goods, to changes in expenses of production, to speculative changes of demand for goods, or to psychological forces working independently of facts.

§ 3. Before proceeding to an analysis of causes, it is well to have before us the world movement of prices from 1850 to 1915, as well as the world production of gold by periods in the corresponding years.[1] Both are

[1] This chapter is a combination of an address delivered before the American Economic Association at St. Louis, in December, 1910, and an address

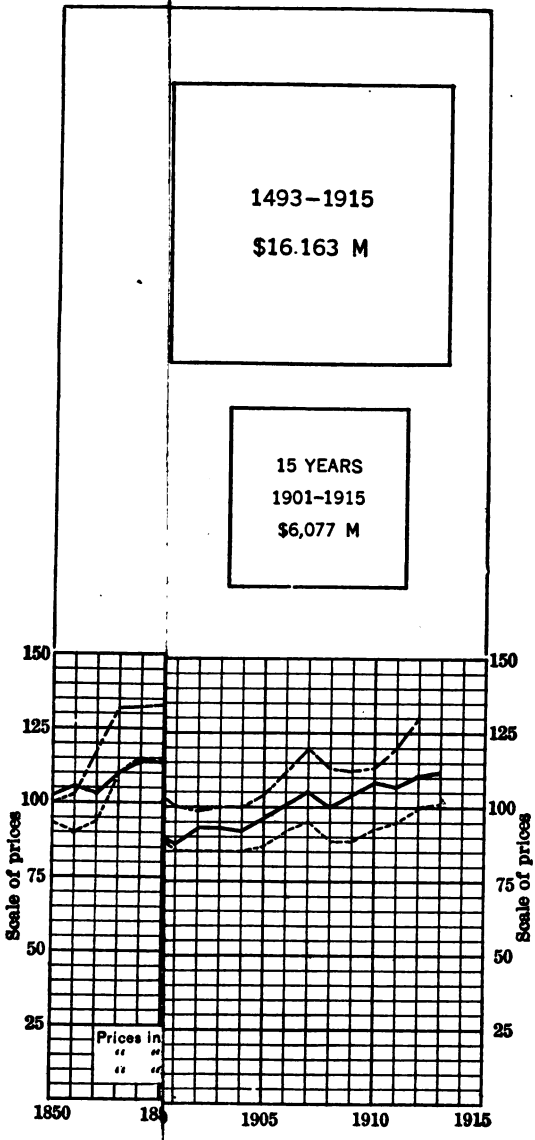
presented together in Chart III, so that direct comparisons between the two are made possible.

The prices for the United States are taken from the Falkner table of the Aldrich Report from 1850 to 1892, to which are added the index numbers of the Bureau of Labor, reduced to the scale of the Falkner table in 1892. Since the currency prices from 1862 to 1878 have been reduced to a gold basis, by using the premium on gold as a means of changing paper to gold prices, it is obvious that the line of gold prices in those years would not be the same as if we had then had a gold standard. The sharp fluctuations during the Civil War, as shown in the chart, are not to be taken as normal. The corrective is to be had in the lines of British and German prices. Also, while the American index numbers since 1891 have been computed on a different base, and on quotations not the same in number and articles as in the Falkner table, yet, as experience has shown, the relative change of level as compared with the past is safely indicated by the decline shown in the solid line in the chart after 1891. The combined result of the English,[1] German,[2] and Ameri-

before the Pan-American Scientific Congress at Santiago, Chili, in January, 1909, edited so that the statistics of gold and prices have been brought down to 1915.

[1] Sauerbeck's figures, as continued by Sir George Paish in the *Statist*, are used as the only continuous table available, in spite of objections to the narrow range of articles quoted. The base, being different from that of the American table, 100 is placed at 115 on the chart, bringing a fair equality of starting-points.

[2] The German index numbers are those of Otto Schmitz, given by W. C.


1493–1915
$16.163 M
15 YEARS
1901–1915
$6,077 M
150
125
100
75
50
25
Scale of prices
Prices in
1850
1905
1910
1915

can figures seems to point clearly to a steady decline from 1873 to 1896; to a slow rise, since 1896, to a level not far different from that of 1850–60. The whole line since 1850 and down to 1915 is used in order to provide the historical means of comparing causes and effects for the same forces working both in periods of falling and rising prices.

Since the claim has been vigorously supported, at once in the earlier and the later periods, that prices have been directly affected by the supply of gold, on Chart III are placed areas to represent graphically the relative amounts of new gold produced during the periods in question, as well as the total stocks of gold produced by the end of these periods. The production of gold[1] may be summarized as follows:

PRODUCTION OF GOLD BY VALUE

Period	Amount
1493–1850	$3,158,210,280
1851–1875	3,174,005,000
1493–1875	6,332,215,280
1876–1895	2,467,266,800
1896–1900	1,286,505,400
1876–1900	3,753,772,200
1851–1900	6,927,777,200
1493–1900	10,085,987,480
1901–1915	6,077,903,974
1851–1915	13,005,681,174
1493–1915	16,163,891,454

Mitchell, in the *Bulletin of the Bureau of Labor Statistics*, No. 173, p. 249. As the base is very near that of the American table, the same starting-point of 100 is used for both on the chart.

[1] A careful summary of the annual world production of gold and silver in brief form, from 1493 to 1905, was printed by J. D. Magee in the *Journal*

The simple statistics of production, however, do not give us a statement of the actual stock of gold in the world at a given date, since allowance must be made for the steady losses of gold by abrasion, shipwreck, and especially in the arts. It is not easy to arrive at a definite sum for consumption in the arts. There are only rough estimates, which should be taken with much hesitation. With this understanding, some general idea, even though only approximate to the truth, may be reached as to the existing stock at certain dates, the ratio of the new production to the stock at those dates, and thus the probable supply of gold at the present day.

The available stock in 1850, after the losses and consumption from 1492 to 1850, could probably not have been more than $2,000,000,000.[1] In the period of 1851–75 the consumption in the arts could not have been on the average more than $50,000,000 annually; in the period of increasing extravagance during 1876–1900 we may estimate the annual consumption at not less than $75,000,000; while, since 1900 it may have been greater, perhaps, at least $100,000,000.[2] On the basis of these estimates we may formulate the general results as follows (in millions of dollars):

of Political Economy, January, 1910. These are brought down to 1915 from the *Reports of the U. S. Mint.*

[1] There is a possible error here of perhaps $500,000,000.

[2] The estimate of the director of the U. S. Mint for 1908 is $113,996,000 (*cf. Report of 1909*, p. 80). Soetbeer's estimate for earlier years was about $60,000,000.

Years	New gold	Lost in the arts, etc.	Net addition to the stock	Existing stock at certain dates	Percentage of new gold to existing stock
1850.....	....	....	....	$2,000	....
1851–75.....	$3,174	$1,250 (25 years)	$1,924	....	158
1875.....	....	....	....	3,924	....
1876–1900.....	3,753	1,875 (25 years)	1,878	....	95
1900.....	....	....	....	5,802	....
1901–15.....	6,077	1,500 (15 years)	4,577	....	104
1915.....	....	....	....	10,379	....

Thus it is supposed that out of a total production from 1492 to 1915 of $16,163,000,000, some $5,784,000,000 have disappeared. In my judgment this loss is quite too large; and it is quite likely that the existing stock in 1915 is much greater than $10,379,000,000. The above estimates, however, are given for what they are worth. At least they throw some light on the supply of gold.

It is to be noticed that in the latest period (1901–15) of rising prices the percentage of new gold to existing stock is not very much larger than in the previous period (1876–1900) of falling prices.

§ 4. In the problem of discovering the causes of changes in the level of prices, it is necessary first to reach a conclusion as to those causes which operate on the gold standard in which our prices are expressed. By so doing we may locate the general level—so far as the standard is concerned—or the one thing which

might work as a cause common to all goods. The relation between gold and goods might be illustrated by the familiar mechanical illustration: a rod balanced on a fulcrum, on one end of which work the forces affecting the value of gold, and on the other end the forces affecting the value of particular goods. The relation between goods and gold being a ratio, as one end of the rod goes up, the other necessarily goes down.

There are, as we all know, various forces at work to produce the resultant price level. We may here start from a proposition on which we can all agree. An increase in the quantity of the monetary standard in the world—such as gold—would tend, *other things being equal*, to lower its value and thus raise prices. In trying to find the causes in the price level at any given time (as in 1896–1915) it is necessary, therefore, after having stated the facts as to the increase of gold, to examine also into the influence of "the other things."

To begin, we may take up the demand for gold, which, of course, is both monetary and non-monetary. As to the non-monetary demand we have already furnished the data. The monetary demand should now be taken up. It will be found that it has certain definite characteristics. Whether it be prejudice, or enlightened business judgment, the commercial nations of the world have shown a persistent and continuing disposition to adopt a gold monetary system as soon as their own means, or the forthcoming supply of gold, has made it possible. The United States led

in 1853, when we declined to change the ratio in order to bring silver into circulation when only gold was in use. Beginning in 1871–73, Germany, and later the countries of the Latin Union, Austria-Hungary, the United States (with the resumption in gold in 1879), and India (in 1893), in response to the preferences of the commercial world, placed themselves on the gold standard by legal enactments. The demand for gold all through this period was based upon considerations independent of the movement of prices. For this was a time of falling prices when much was heard of the appreciation of gold and the need of silver. In spite of this tendency toward falling prices, the movement in favor of the adoption of gold went on. Moreover, as may be seen by Chart III, the oncoming supply of gold in the earlier period (1851–75) was very large in comparison with the existing stock (the percentage being 158 as compared with 104 in the period of 1901–15). But it was precisely this large new supply of gold which enabled the commercial nations to gratify their desire for what they believed was a more stable standard. That is, the demand increased *pro tanto* with the supply.

As we enter the later period (1896–1915) we find this momentum toward the gold standard still in force; and other countries in emulation planned to put themselves on an equally stable standard with those whose means had permitted an earlier action—quite irrespective of the fact that this last was a period of rising

prices, while the former was one of falling prices. In this period, Russia, Japan, various states in South America, such as Peru, Argentina, and Brazil, and more recently Mexico, have emphasized the movement away from silver to gold. Moreover, as backward lands, like Turkey, parts of Asia, Egypt, and various districts of Africa, have developed their resources and increased their trade, they have taken on gold in their monetary systems. With increasing trade also there are more exchanges of goods; hence, even in countries (like Great Britain and the United States) that do not use gold to speak of, except in reserves, there are increasing loans and deposits and thus somewhat of a demand for more gold in banking reserves. Consequently, in countries long established on the gold standard there will be a steadily increasing demand for gold as exchanges expand. We find this to be a special characteristic of the demand for gold (certainly not existing in the demand for silver). The power of developing countries to soak up new gold is as marked a part of present conditions as is the power of a porous and sandy soil to soak up a heavy rainfall. We must, therefore, take full account of the noticeable fact that the recent demand for gold seems about to keep pace with the new supply; that a shipment of gold from the mines to London is to-day eagerly competed for, not only by European countries, but by Egypt, India, Turkey, Argentina, and Brazil.

It appears that from 1896 to 1915 the monetary use

of gold has increased by over $4,000,000,000; while that of silver has decreased by about $1,800,000,000.[1] Seven-eighths of this total of gold was in banks or public treasuries.

The countries which have been taking on gold most extensively are as follows (in millions):

	1896	1915	Increase
United States	$672	$2,299	$1,627
Russia	488	1,058	570
Germany	675	714	41
South American States	40	313	277
United Kingdom	584	661	77
Austria-Hungary	167	(1910) 351	184
Italy	100	335	235
Japan	79	143	64

Besides the demand for gold in the arts, and the apparent monetary demand, as thus already presented, we must not omit to take into account also the large stocks of gold held by banks and institutions which publish no statements. In the hands of large private institutions like those of the Rothschilds, Bleichroders,

[1] See the figures for the monetary stocks of gold and silver in the principal countries of the world given for 1896 and 1915 in the *Reports of the Director of the U. S. Mint*, 1896, pp. 46–47, and 1916, pp. 220–221. It is not safe, however, to assume that these estimates are wholly correct.

	Stock in Monetary Use (in Millions)	
	Gold	Silver
1896	$4,143	$4,236
1915	8,258	2,441
	+$4,115	—$1,795

and others, great amounts of gold are carried. It is from these stores that the needs of states, such as Austria-Hungary, France, Italy, and even the United States (in Cleveland's administration), have been supplied without drawing down visible reserves. The difference between the sums of gold in circulation and in public reserves, on the one hand, supposedly over $8,000,000,000, and the total stock in 1915, on the other, probably over $10,000,000,000, may be regarded as the amount of gold held by those not obliged to publish their holdings.

Thus far, then, we have examined the one factor of demand for gold, among the "other things" (which were supposed to remain equal). There is abundant evidence to show that the demand for gold, in this recent period of rising prices (1896–1915) has been as strong as, or even stronger than, the demand for gold in the previous period (1873–96) of falling prices.

§ 5. Some writers carelessly reason directly from the recent large annual production of gold to the recent contemporary rise of prices. This is an old fallacy. The new supply in any period should be compared with the total stock of gold in existence at the beginning of that period. The total available stock is not—as, for instance, it is in the case of wheat—the annual supply, but all the gold mined since 1492 less the amount lost by accident, abrasion, or destruction in the arts. The durability of gold causes all the

remaining past product—unlike that of such commodities as wheat—to form the stock of to-day. Because of this durability the total stock is constantly increasing, and as we approach the present time the annual production, even though large, bears a constantly smaller ratio to the total supply. A change in the demand or in the annual supply affects at once very slightly the value of the large total stock; while a sudden new war demand for, or a shortage in the annual yield of, wheat produces a great change in its price. Therefore, in order to change the value of the total stock of gold, the new supply must be large—not absolutely, but in relation to the total world's supply. A great rainfall in France a few years ago disastrously raised the level of the Seine, but it did not perceptibly raise the level of the Atlantic Ocean. It takes a long time, moreover, for an increasing supply of gold to make its influence felt on the value of gold throughout the commercial world. It may be months after the heavy rains in Abyssinia before the water rises in the Nile of lower Egypt. That is, changes in prices due to changes in the value of the total stock of gold, under the influence of new production, must necessarily be slow and gradual. The larger the accumulated stock of gold—now over $10,000,000,000—the less likely is it to be influenced in short periods of time by any causes affecting gold alone. On the other hand, a commodity like wheat, may undergo rapid or extreme changes in price for

causes in no way connected with gold and which affect only the commodity itself. Consequently, serious and rapid changes of price must in general be due to other causes than gold—that is, to causes touching the goods themselves. We arrive, then, at the conclusion that changes of price due to gold can only be very slow in operation, while quick and frequent variations of price must be found in causes affecting only goods.

The influence of the large production of gold upon the level of prices in the last few decades presents one of the most interesting problems in theoretical as well as in practical economics. Since Ricardo, and even before him, the familiar theory has been held that an increase of the circulating medium necessarily produced an increase in the prices of goods. Yet, in the United States, we have had falling prices with an increasing circulation. Indeed, the old theory of Ricardo and Hume no longer holds undisputed sway.

There seems to be general agreement that the price of an article, like wheat, is the quantity of the given standard for which it will exchange. Obviously, price is an expression of the exchange ratio between a commodity, like wheat, and a standard, like gold. Hence, in these later days, it has been seen that this ratio can be changed by forces affecting either term of the ratio. While the causes influencing the supply of and demand for gold are supposed to be constant, we know that causes touching the demand for and supply of

wheat can modify its gold price. A scanty harvest and a reduced supply of wheat, or a new demand, will raise its price; while reduced freights, improved processes, an increase of supply, or a diminished demand, will lower its price. These facts, touching wheat alone, are self-evident; and they show that changes in price are not to be attributed solely to forces affecting the gold factor of the price ratio. Yet, it is also true that the price of wheat, or of all commodities, expressed in gold, would be affected by anything which was important enough to change the value of gold. Thus we see that the problem of price is one which includes a study of two sets of forces: (1) those influencing the standard, and (2) those influencing the commodities in the price lists. A change in a list of prices, in itself, implies nothing as to the cause of the change. The originating cause may be operating upon gold, or upon the goods; or there may be causes working at once upon both sides, opposing or co-operating. It is, therefore, unsafe to dogmatize upon the causes of a change in prices without an investigation into all the facts touching both gold and goods.

§ 6. Those who believe that the rise of prices since 1896 is due to the abundance of new gold have difficulty in showing by what direct economic processes the new gold affects prices. Theoretically, it is assumed that the increased gold must be offered against goods and thus declines in value. But what is the

force that impels a man with gold in his pocket to give more than before for a commodity freely produced and sold in the open market? If any one seller raised his price in view of larger buyers' funds, without an increase in his expenses of production, other producers and sellers would compete in keeping down the price. Such a theory is too detached from the facts to receive credence.

It may be claimed, however, that the entrance of new gold in large sums into the currencies[1] of the world since 1896 indicates precisely the way by which it can be offered as increased purchasing power against goods and thus increase prices. But in precisely the same way one might say that the new crops of the United States—new wealth created from the soil in one season, worth (without counting expenses of production) from $8,000,000,000 to $12,000,000,000—give new purchasing power to its owners, as well as new gold; that they, too, are offered for other goods and thus ought to raise prices. Moreover, if the new gold has increased prices by entering the currencies of leading countries, how does it happen that prices have risen quite as high in the United States as elsewhere, in spite of the fact that with us gold—although the standard of prices—is almost never used as a medium of exchange in the actual purchase of goods?

The better thinkers, to meet this difficulty, urge that the new gold flows into the reserves of banks,

[1] *Cf.* p. 93.

makes larger loans possible, thus increasing the credit or purchasing power offered against goods and consequently raising general prices. Here again appears the old fallacy of supposing that the prices of freely reproducible goods are fixed only by the demand. Indeed, it ought not to be necessary to repeat that supply (and expenses of production) also affects price as well as demand. Steel rails have a price fixed not merely by the fact of an urgent demand, but by the expense of producing the needed supply, which expense is far less than it was a few decades ago.

But let us appeal to banking practice. Because there is more gold in the world do banks in the United States necessarily expand their loans? Certainly not. First, a bank decides whether the loan is safe or not; then, if a new loan is made, and a credit in the form of a deposit account is given, the bank may need more reserves. It is possible in times of prosperity, that an increasing number of persons who have salable goods in warehouses or in transit may wish loans. Speaking generally, the more goods produced and exchanged the more loans are wanted. Thus, first having met the demand for legitimate loans, the bank as a consequence arranges to supply the reserves (whether in gold, or even in lawful money) required by law or banking experience. As a matter of banking common sense, the increase of loans is the cause of increased reserves; not that the increase of reserves is the cause of making loans. It is not the presence of gold in the

country which is the cause of increased loans, any more than an increased number of freight-cars is the cause of an increased movement of goods. If increased loans are wanted, the ease in getting gold reserves makes the process easier; just as when crops are large an abundance of cars makes shipment easier. No matter how plentiful gold may be, if the bank has not the means to offer for the gold, how can it increase its reserves? No matter how abundant railway-cars may be, crops may be scant. However abundant gold is, a bank can meet the demand for increased loans only out of the capital or deposits in its possession. It would be absurd to assume that an abundance of new gold would allow a bank having a capital of only $100,000 and small deposits, to lend indefinitely, say, to $100,000,000. A large bank carries a large sum of loans, not because gold is abundant, but because its funds in hand are large; it uses out of its large funds only that sum which is necessary to get the gold or lawful reserves that experience shows are necessary for its discounting business. To say that the presence of abundant gold is the cause of increased loans is to put the cart before the horse. It would be like saying that the cause of the excavation of earth in the Panama Canal was the existence of steam-shovels, irrespective of the grant of funds to buy shovels. The banks lend the use of capital, not money; while cash reserves are only a tool, or a part of the machinery necessary in banking operations. Indeed, millions of loans are

made and repaid by checks without the use of a cent of money. In fact, no matter how abundant gold is, a bank keeps not a dollar more of inert, non-earning reserves than is necessary for carrying the sum of loans consistent with its present resources.

§ 7. There are, moreover, other objections to ascribing the rise of prices since 1896 to the abundance of new gold. Some writers have been induced to assign the chief rôle to gold under the impression that the rise of prices has been general throughout all countries, that all commodities have been affected, and that such a result must have been due to a single universal cause like gold.

In Great Britain, the *Economist* and Sauerbeck tables have been referred to as showing a great fall in the value of gold due to the rise of prices. Curiously enough the index numbers of the London *Economist* (for only 22 series) show a figure of 2.236 in 1890, 2.136 in 1905, 2.197 in 1909. That is, in the twenty years from 1890 to 1910 there was no rise of British prices, in spite of a new production of gold in these years amounting to $5,881,000,000. A rise of prices came later, in 1912–14. In Sauerbeck's table (chiefly extractive products) the index number was 72 in 1890 and 1891, 72 in 1905, 73 in 1908, and 78 in 1910. The average of 1902–11 was only 74. Obviously these English figures do not prove that any serious rise of prices to 1911 took place in all countries. In Ger-

many, Schmitz's total index number in 1890 was 107.5, and in 1910 was 113.6—not a startling change of level (some 5.6 per cent.).

In the United States the rise was greater than in the countries just mentioned, but not as great as is generally supposed—chiefly because comparisons are apt to be made with the exceptionally low level of 1896. Bradstreet's index number for January 1, 1890, is 90.191, for 1905 is 100.318, for 1910 is 123.434—about the same level as in 1912. The index number of the United States Bureau of Labor (*Bulletin* 173) for 1890 was 112.9; for 1905 was 115.9, and for 1910 was 131.6. That is, there was an average rise of 16 per cent. in American prices. Certainly the recent rise of prices has not been the same in all countries. If we make a comparison of the general level (see Chart III) in 1915 with that of 1850–60, it is surprising to discover that prices on the average are no higher in 1915 than in 1850–60, in spite of the fact that the available stock of gold has been quintupled since 1850. Such cold facts make it very plain that many other forces than the quantity of gold have been working on the level of prices.

But neither has the rise of prices been uniform in any one country like the United States—the ground for attempting to prove a common cause such as the value of gold. A study of the tables of the Bureau of Labor discloses the remarkable fact that out of 203 commodities, 36 actually fell in price by 1908, and 2

remained unchanged. These 36 were: hops, sugar (granulated), mutton (dressed), soda-crackers, apples (evaporated), pepper, prunes (California), tea (Formosa), mackerel, Rio coffee, soda (bicarbonate), covert-cloth, ginghams, sheetings, chinchilla overcoatings, candles, matches, lead pipe, shovels, nails (wire), wood screws, silver, putty, quinine, alcohol (wood), white granite cups and saucers, nappies (glass), tumblers (glass), carving-knives, knives and forks, manila rope, manila wrapping-paper, and wood paper for newspapers.

Then, too, while the average rise of all the 203 commodities from 1890 to 1908 was only 9 per cent., there was no uniformity of movement in the various groups within the whole list. For instance, farm products rose from 110.0 to 133.1; fuel and lighting from 104.7 to 130.8; while drugs and chemicals show little or no rise at all. Moreover, there are wide variations in the prices of the same goods within any one year, which show how important other causes than gold must be; for these great changes cannot possibly be assigned to gold. A few instances of changes of wholesale prices entirely within the year 1908 will suffice:

Cattle	110.3–142.0	Lard	115.4–159.0
Fresh beef	117.0–142.3	Mutton	87.5–150.0
Hides	100.7–170.8	Cotton	118.7–150.4
Milk	88.2–156.9	Calico	90.6–133.7
Butter	102.5–141.8	Cotton flannels	109.6–128.9
Bacon	106.4–161.2	Ginghams	90.6–115.3
Hams	97.2–131.8	Print-cloths	105.7–145.3

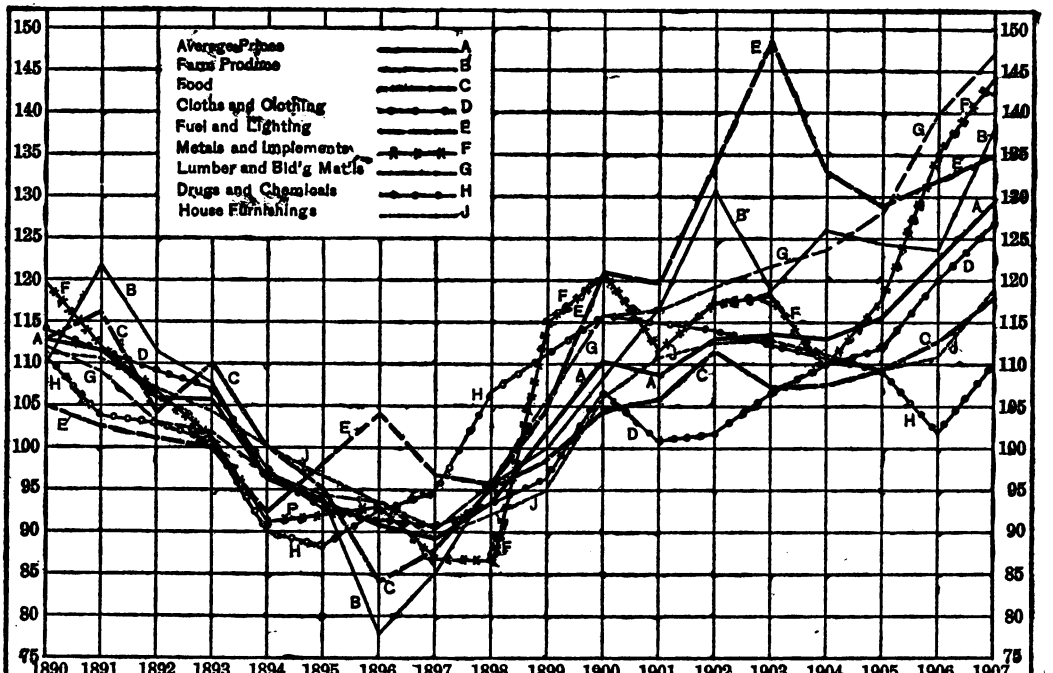
In studying the movements of prices it is to be observed that the single index number giving the combined average of the changes in price in any one year will not in itself disclose the diversity of changes going on in separate groups of goods, or in any individual article. In order to get the facts for any investigation into the causes affecting the movement of prices in certain groups of commodities, there are presented in Chart IV the diverse movements of eight groups of products which formed the basis for the computation of the general average of prices by the Bureau of Labor. It will be noted at once that the separate variations of the several groups are so marked as to make clear the absence of any one common cause. The only inference as to a general cause seems to be that there was a distinct fall of prices following the panic of 1893, and a general tendency to a rise after the beginning of recovery in 1897. As we have shown elsewhere, these sudden and extreme fluctuations of price could not have been due to gold, but to causes necessarily affecting trade in the goods themselves.

For the same reason that light is thrown on the forces influencing prices by separating the total average into the averages for each group (Chart IV), it would also be desirable to separate the average for each group into the lines representing the changes of price for single commodities. Inasmuch as the actual quotations for each separate article are the elements out of which the resultant average for all goods is computed,

CHART IV

Changes of Prices in Certain Groups, 1890–1907

100 = Average of 1890–1899



we have in the price fluctuations of separate articles the only safe basis for examining into the causes operating upon the prices of goods as distinct from those operating on gold. For this purpose I have had prepared diagrams[1] showing the change of price from 1890 to 1906 of more than 100 separate commodities which had the most importance in the market. These are, of course, too numerous to be reproduced. The most striking phenomena observed were the rapid and extreme variations in the changes of individual prices. It is impossible to assign these to changes in the value of gold. On the other hand, there was a general tendency to higher prices after 1897, which might reasonably be regarded as due to some common cause or to a set of causes working together in the same direction.

§ 8. In trying to find the various causes, independent of gold, which could influence prices, especially through expenses of production of the goods themselves, we may enumerate the following:

(1) Inventions and increased skill of management.
(2) Tariffs and taxation.
(3) Higher cost of materials.
(4) Higher wages for the same effort.

In studying the causes of the change in prices in 1896–1915 we shall have some guidance in the study of the period from 1850–96. In the recent period there was a rise of prices; in the earlier period there was a

[1] Much help was given me by Mr. Carl Lambach.

fall of prices. Obviously, while the same fundamental forces—both on the side of gold and on the side of goods—were at work in both periods, yet there must have been different combinations of these forces in the two periods under consideration. In spite of the great additions to the supply of gold in 1850–96, the effect of a new demand for gold, together with the phenomenal cheapening of the expenses of providing goods by opening up new resources and by the use of improved methods, far outweighed all other influences, and led to a general fall of prices. From 1895 to 1915 the introduction of improved machinery, better methods of manufacture, applications of science to production tending to lower prices, while appearing with more or less importance, seem to have been overwhelmed by other potent forces tending to increase the expenses of production. In fact, while trying to ascertain the causes for a given change of prices we are obliged to see that the resultant is a complex of several co-operating and antagonistic forces; and only by analyzing each and weighing the relative importance of each for or against a rise can we reach any sane conclusion. In this case, (1), the cheapening by improved processes of production, has not been so strong an influence as the forces (2), (3), and (4), tending to keep prices at a higher level.

One cause of the higher level of prices—one which was especially operative in the United States and the Continental countries of Europe—was the increasing

rates of customs tariffs and of taxation due to militarism. It is impossible to attribute the generally higher prices due to the heavy load of taxation laid upon the consumer to a general cause like the cheapening of gold. In the United States the enormous sums spent by our national government on harbors and rivers, on pensions, on the army, and especially on the new navy, must be paid for by somebody; and that somebody was the consumer of the taxed goods. On an average, imported dutiable goods were increased in price to the American consumer by over 40 per cent. But, to the extent that importations were impeded, not all of this tax of over 40 per cent. went to the government, since much of it went to the protected interests. The duties were so high as not to be revenue duties, for our treasury got only about $300,000,000 of this tax, or less than half of its then annual expenditure. The truth is just coming home to the mass of people that our extremely high protective duties have raised the expenses of producing many goods, raised prices, and raised the cost of living to every family throughout the length and breadth of the land. This is one reason why industrial activity to-day spells "hard times" for the unorganized consumer.

Some of our public men were not dealing fairly with the people when they directed attention solely to the Payne-Aldrich Act of 1909, and asserted that it had in some respects lowered duties. Suppose that it had done so, as compared with the Dingley Act of 1897.

Then, that only transferred the cause of offending to the duties fixed by the Dingley Act, which were, on the whole, the highest in our list of high-tariff enactments. It is no comfort to a drowning man in forty feet of water to be told that just back of him the water was forty-one feet deep. It is no comfort to the consumer submerged by import duties of forty, or a hundred, or several hundred per cent., to be told that a microscope will discover a fractional change of a per cent. here and there—when in fact hosiery, gloves, and clothing bear increased duties. It is not ingenuous to harp on the insignificant changes in the Act of 1909, when the real burden was made heavy in 1897, and only continued in 1909.

It is not fair, of course, to charge the increase in the prices of all goods to the tariff. The most pernicious and the most direct effect of our high protective tariff is to be found in the duties upon raw materials, where the taxes on materials unduly raise the prices of finished goods. For instance, if foreign wools (required in various mixtures of clothing fabrics) be taxed 40 per cent., then, if the woollen manufacturers were to receive an additional protection of 40 per cent. on their finished goods, it would be 40 per cent. on an outlay increased by the tax on their materials. Thus by complicated compensatory duties, the consumer pays 60 or 80 per cent. more, in cases where he should pay on woollen goods only 40 per cent., provided raw materials were free. An illustration of the heavy

burden thus laid upon all of us by the tariff may be found in the case of wool and woollen goods. Wool was made free in the Wilson Act of 1894; and taking the average prices of 1890–98 as 100, the comparison between the prices of wool and woollen goods in 1896, before the Dingley Act, and 1908 may be seen in the following table:

PRICES, 1896–1908. 1890–98 = 100

Articles	1896	1908
Wool	70.6	118.3
Blankets (wool)	89.3	113.1
Broadcloths	79.7	115.6
Carpets	90.2	118.9
Flannels	85.4	122.4
Horse-blankets	90.8	126.5
Overcoatings (wool)	86.7	122.6
Shawls	89.1	(1907) 107.0
Suitings	87.8	127.6
Underwear (wool)	92.7	115.8
Women's dress-goods (wool)	67.5	127.1
Worsted yarn	72.9	117.6
Two-bushel bags	91.6	134.3
Cotton flannels	93.9	119.2
Cotton thread	99.6	131.7
Drillings	100.2	130.6
Sheetings	97.4	120.0
Shirtings	97.9	120.0
Hides	86.6	142.6
Leather (harness)	98.6	121.1
Currants	87.2	162.4
Molasses	(1897) 83.1	112.7
(All) Metals and implements	93.0	125.4

In order to show the actual rise of prices fairly chargeable to the extremely high tariffs since 1897, a

few other articles besides wool and woollens have been added to this table taken from the cotton schedules (where the increase cannot be charged to the duty on raw cotton). An increase of 25 to 35 per cent. is not infrequent. And in the metals schedule (for which also we supply our own raw materials) the rise in price was directly affected by the duties on the finished goods. One is struck by the precipitous climb of prices of those articles affected by the Dingley Tariff Act immediately after its passage in 1897. This can be observed in lines F, D, C, and G in Chart IV; but the effect of the tariff is much more clearly seen in the many price lines of separate articles, such as carpets, glass, wool, woollens, blankets, earthenware, furniture, jute, files, wood screws, cut nails, wire nails, augers, chisels, hammers, planes, axes, sheetings, worsted yarns, women's dress-goods, barbed wire, molasses, shovels, tickings, etc.

It may have been said that as far back as 1898 no one grumbled about the high cost of living, although we had as high a tariff then as later; hence it might have been said the higher prices could not have been ascribed to the tariff. To ascertain the effect of the tariff, however, the true comparison should be made between prices in 1894–97 and in the period from 1897 on. The former was a time of low prices, aggravated, to be sure, by the panic of 1893; while the latter was throughout a period of rapidly rising prices. The panic of 1893 was due ultimately to overexpansion, and

immediately to the fear of the silver standard. One can have little respect for the absurd reason, given by politicians for the cause of the panic of 1893, that it was caused by the Wilson Act of 1894 or the fear of its passage. As a matter of fact the panic came on long before the act was passed.[1]

The rise of prices due to heavy taxation has certainly not been confined to the United States. The tendency to higher protective duties in Europe and the phenomenally heavy taxes required by military and naval establishments all help to explain whatever there was of a general cause behind the movement of prices to a higher level in all countries. The extravagance of States and municipalities in public works, the waste of city funds in official corruption in our land was all being paid for in taxes by the individual consumer in the higher expenses of production and consequently in a higher level of prices.

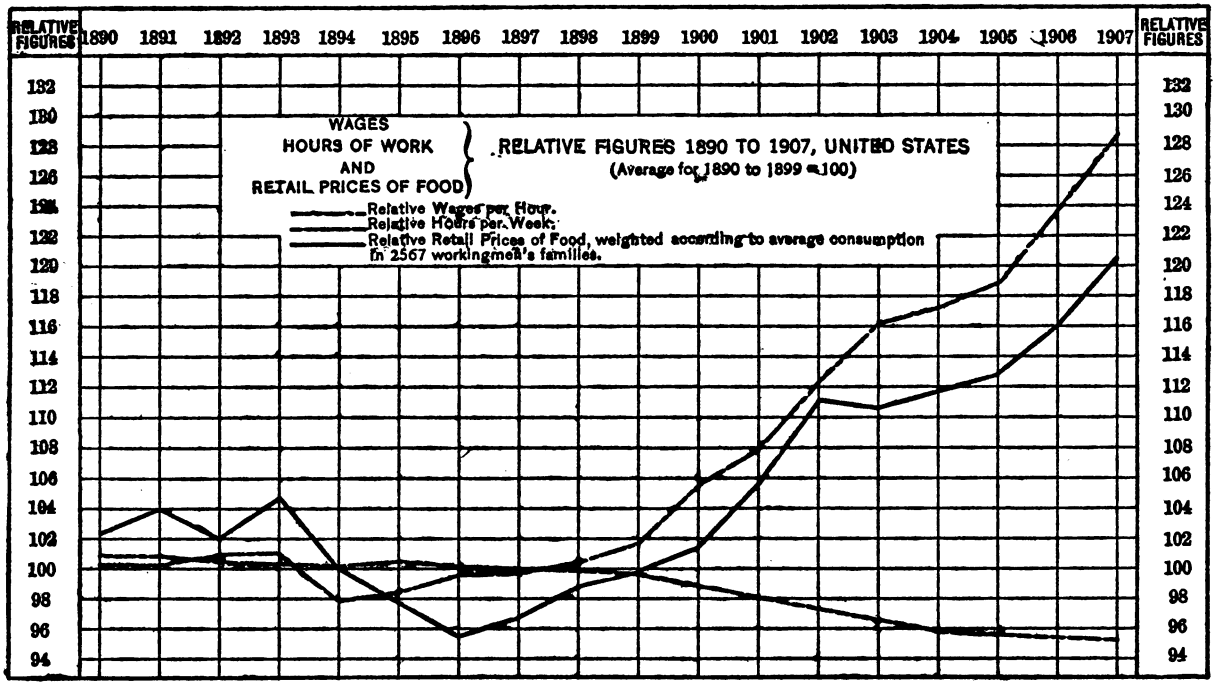
Recent years have also witnessed an increase in the prices of articles used in further manufacture. Whatever the cause of this increase, it is evident that it would produce a distinct addition to the expenses of

[1] Moreover, although it has been said that the subsequent Act of 1909 made inconsiderable changes in duties, it is very significant that, in anticipation of, and following, the act of August, 1909, Bradstreet's index number should have shown such a marked upward tendency, as follows:

January 1, 1909	8.2631	August 1, 1909	8.5039
February 1	8.3022	September 1	8.5906
March 1	8.2167	October 1	8.7478
April 1	8.3157	November 1	8.9635
May 1	8.3016	December 1	9.1262
June 1	8.3960	January 1, 1910	9.2310
July 1	8.4573		

CHART V

Wages and Prices, 1890–1907


RELATIVE FIGURES
1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907
RELATIVE FIGURES
132 130 128 126 124 122 120 118 116 114 112 110 108 106 104 102 100 98 96 94
WAGES
HOURS OF WORK
AND
RETAIL PRICES OF FOOD
RELATIVE FIGURES 1890 TO 1907, UNITED STATES
(Average for 1890 to 1899 = 100)
Relative Wages per Hour.
Relative Hours per Week.
Relative Retail Prices of Food, weighted according to average consumption in 2567 workingmen's families.

production of many staples of the market, leading to a rise in the prices of the goods into which they enter as materials. This rise of prices of materials is notable in pig lead, tar, oxide of zinc, sheet zinc, tin plates, bricks, rubber, crude petroleum, wool, lumber, cotton, hides, coal, Bessemer pig, coke, and pig iron. In each case there was a cause peculiar to the commodity which would explain its rise of price. Under shortage of supply we may cite rubber, or lumber; under monopoly, coal and pig iron; under the tariff, tin plates, wool, and hides. In no instance would it be necessary to have recourse to such a common cause as a fall in the value of gold.

§ 9. One universal element in the expense of producing goods of any kind, manufacturing or agricultural, is the wages of labor. In the United States money wages per hour, expressed in gold, have risen between 1890 and 1907 by about 28 per cent. These facts may be seen in the following table:

Year	Wages per hour	Year	Wages per hour
1890	100.3	1899	102.0
1891	100.3	1900	105.5
1892	100.8	1901	108.0
1893	100.9	1902	112.2
1894	97.9	1903	116.3
1895	98.3	1904	117.0
1896	99.7	1905	118.9
1897	99.6	1906	124.2
1898	100.2	1907	128.8

Nor is the higher range of wages confined to the United States; it is that part of an increased expense of production which is undoubtedly common to many countries, and which, by making the phenomena of higher prices wide-spread, probably gives occasion for the belief that the higher prices, being world-wide, must be due to some one general cause like gold. But it certainly is true in other lands that there is little complaint of higher prices where wages have not risen. In England, for instance, cost of living has not increased as much as with us—even as regards dairy products and meat. But English wages are much less than ours, as a few examples will show:[1]

	England and Wales per 48 hours week	United States
Bricklayers	$9.12–$9.85	$28.80–$33.60
Carpenters	8.80– 9.57	14.40– 28.80
Plumbers	8.60– 9.67	19.20– 28.80
Plasterers	8.88–10.14	24.00– 33.60

Certainly, cost of living also in France had not yet risen as much as it had with us. Since 1905 wages in the next two years had risen about 5½ per cent., or about the same as food.

It is not safe to assume, however, that higher money wages always and necessarily cause higher prices. The question may be asked whether the rise of wages is one of the causes of the rise of prices, or whether the rise of prices has made possible the rise of wages. In pros-

[1] Computed from data in *Bureau of Labor Bulletin*, 77.

perous periods, when prices are rapidly advancing, demands for higher wages are easily granted. That is, since the valuation of goods goes on separately from the valuation of labor, and under differing conditions of demand and supply for each, the returns on goods sold may compensate for any increase of wages. In comparing the movement of wages with the movement of prices of the goods on which the labor is engaged, we find in our statistical tables no direct relation whatever between the rise of prices and the rise of wages. For instance, no such connection is shown in the cases of window-glass, silk, hogs, hides, wheat and flour, paper, bricks, and many others. Unquestionably influences independent of the prices of goods had acted on the rate of wages.

The matter of pivotal importance is the efficiency of labor or of the management. It should be kept in mind that a quotation in a price-table is given for only a single unit (as a bushel or pound) of a commodity; hence this quotation implies nothing as to the number of units produced by the combined factors of production in any given industry. It is not only the price of one unit, but that price multiplied by the total number of units of goods produced which determines the income of a concern and thus affects its power to pay higher wages. Anything which increases the number of units produced by an industry increases the sum from which higher wages can be paid. In case higher wages are forced by unions for the same labor efficiency,

it may happen that the managers can devise some new process, or use some invention, by which more units of product can be made, so that the higher wages can be compensated for by the efficiency of the manager and the prices of the goods remain the same. It may even happen that the introduction of special machinery or of improved processes may cause such an immensely greater number of units to be produced by the same labor and capital that not only may the price of each unit of goods be lowered, but also the total income of the industry be very much enlarged; thus it has often happened that higher wages have been paid at the very time when prices were falling. Therefore, while there may be some direct relation between the total value of the product and wages, there may be none whatever between the price of a single unit of goods and the rate of wages.

Nevertheless, in stationary conditions of industry, in the times between the introduction of new improvements, an enforced rise of wages of labor not accompanied by any increase in the number of units of product, directly raises the expenses of production per unit and leads to a rise of prices. In industries like agriculture in which machinery is less relied on than manual labor, a rise in wages, not carrying with it an increase of efficiency, will cause higher prices. Such cases are very numerous. Indeed, it has been the policy of the labor-unions to demand an increase of wages because of an increase of the cost of

living, and not because of an increase of the efficiency of labor. Consequently most of the rise in wages due to the activity of labor-unions must result in higher prices. There has been in fact a marked advance in wages. If so—unless managers have been able to devise compensating improvements—one of the main elements entering into the expenses of production of all kinds of goods has risen in cost, and has had its effect in raising prices. The fact that wages have risen all over the world, seems to give a reason for believing in the existence—so far as there is any—of a common cause working for higher prices.

As regards many other influences affecting prices, but not directly through expenses of production, something may be said in the next chapter.

CHAPTER IV

THE INCREASED COST OF LIVING

§ 1. The cause of the rise of prices ceases to be an academic question, and becomes a very practical one, the moment this rise directly touches the cost of living of great masses of our people, especially those dependent on wages or fixed incomes. No one doubts that there has been a rise of prices greatly increasing the cost of living. In previous chapters it has been shown that the causes of this upward movement are to be found mainly in the forces affecting—not the value of gold, but—the expenses of producing and distributing the goods themselves. That is, if the gold standard in which these prices are expressed has not varied much for causes affecting itself (since a new demand has risen to meet a great new supply), the prices of goods must have varied greatly for causes directly affecting the goods themselves. It is as if a mountain peak had not changed its elevation above the sea; yet men may have gone up or down its side and thus have changed their position relatively to its top.

The moment we pass from considerations touching gold to those affecting goods themselves, we find at once a large group of commodities which have risen in price for reasons which can in no possible sense be ascribed to the cheapening of gold. This group, more-

over, is the one which most directly concerns the cost of living of every one. Without doubt one of the most important factors in raising the cost of living has been the increased price of food due to the changing conditions of agriculture. While, as has been noted, the general rise of prices on an average has not been as high as generally supposed, there can be no doubt as to a general belief that prices have decidedly risen. The cause of this belief is clearly due to the unmistakable rise of price in the one group of food articles entering into all our daily consumption. (Chart IV, B.)

Farm and food products have changed in price for obvious causes peculiar to these articles themselves. Moreover, it is in connection with these products—especially meat—that we have heard most in the recent discussion about the high cost of living. Averages of many commodities have little practical significance to the mass of people. The social importance in changes of prices resides in those which affect the articles entering into the budgets of the plain people. When food rises in price it is serious; but when furs and silks rise it is not serious.

First, what are the facts before the war as to the rise of prices of food? Taking the basis of 1896–1900 as 100, according to the secretary of agriculture, the 14 farm products (hay, cotton, hogs, flaxseed, cattle, barley, wheat, rye, corn, hides, oats, etc.) have risen most. As compared with an average rise to 126.4 for all the groups combined, there had been a rise in 1908

to 141.9, as compared with 128.7 for food products (47 articles); 132.8 for lumber; 121.9 for clothing; 125.3 for fuel and lighting; 124.9 for metals; 119.5 for house furnishings; and 106 for drugs.

But averages of wholesale prices for groups of articles have very little interest for the housekeeper. Food products as a group had risen to 128.7 in 1908; but how as to specific articles? Taking 1896–1900 as a base of 100, the following table will show how much such articles of every-day consumption had risen:[1]

Milk (N. Y.)	129.8
Eggs	205.1
Creamery butter	151.7
Factory cheese	145.3
Mackerel	108.2
Codfish	153.1
Beans	163.4
Peas	146.8
Potatoes	152.2
Apples	190.8
Wool (Ohio)	137.3
Hides (native)	167.9
Burley tobacco	177.5

Here is an increase of from 30 to 100 per cent. in articles of food; while other groups, such as clothing and house furnishings, have risen some 20 per cent.

Such being the facts, what are the causes of the increase in the prices of farm and food products? As regards those articles consumed in every family, rich or poor—such as milk, eggs, butter, cheese, beans, peas, potatoes, apples, and the like—the answer is not

[1] *Report of the Secretary of Agriculture*, No. 91, 1909, p. 20.

far to seek. In the main it is an increase of demand out of proportion to the available supply. The movement of population from the farm to the city has been going on for decades, as every one knows. The less enterprising, the less active, the less educated have been left on the farms; the bad roads, the remoteness of farmhouses, have made social life less attractive in the country. The great prizes of success in the professions and in industry, the eager, busy life of the towns and the cities, the glamour and lure of the varied excitements in the town, and the desire to escape physical exertion and hardship, have drawn the youth away from the land and made agricultural labor scarce or inefficient. The labor economy of agricultural machinery cannot fill the gap; for the operations of agriculture are not continuous and uniform as in the factory. Therefore, the actual practices of dairy-farming, crop-growing, and treatment of the soil have deteriorated, with the loss of brains and labor—only to be checked (but not yet by any means reversed) by the splendid teaching of experiment stations and the Department of Agriculture. To-day, much of our land does not begin to yield what it is capable of. Our methods are bad and wasteful—and the supply of food for the urban demand is not coming forward in the proportion of the new demand.

Moreover, in the older States farm-land has enormously increased in value. The farmers who have accumulated a competence and retired to the towns,

for instance in central Illinois, have not grown rich primarily by the sale of their crops, but chiefly by the rising value of the land. The farmer who now buys land at $80 to $150 an acre, and who pays wages high enough to draw labor away from the city, must get higher prices for his products than in the past, in order to cover his higher expenses of production. Including the greater cost of the land, the higher prices of labor, the phenomenal rise in the prices of lumber and building materials, it is but natural that the expenses of producing foodstuffs should have gone up, and should stay up permanently, unless there is to be a great national reaction in favor of country life. From this time on we must expect to see the effects of an increasing pressure on the land. Dry farming and irrigation are taking up lands hitherto unoccupied; but, in truth, our only real recourse is in improved methods of cultivating the land now under tillage.

How much, in particular, has meat risen? Before the war unfed beef at the farm was not much higher than it was before 1900. The price of beef, however, is affected by four processes before it gets to the consumer: (1) feeding; (2) slaughtering; (3) wholesaling; and (4) retailing. As against 100 in 1896–1900, steers at Chicago had risen in 1909 to 126–136; dressed carcasses to 123.7–129.7; retail prices of roasts to 132.3; and of steaks to 133.7. That is, beef had risen by about one-third of its price as compared with the average of 1896–1900.

Hogs had risen in price at the farm in about the proportional rise in price of other things. Hogs had risen to 147.3 in 1909; wholesale carcasses to 180.5; the retail prices of fresh pork to about 142 (1907); and bacon to about 164 (1907).

But how as to live stock? Live stock and farm crops have shown a special increase in price, at the farm, as follows:

(100 = average of 1896–1900)

Live Stock, 1909		Farm Crops, 1909	
Horses	264.4	Corn	218.6
Mules	235.1	Oats	209.6
Swine	147.3	Potatoes	192.4
Sheep	147.1	Wheat	166.2
Milch cows	120.4	Rye	162.1
		Buckwheat	161.9
		Tobacco	161.4
		Barley	147.3
		Cotton	138.4
		Hay	122.9
Live stock average	193.1	Crops average	180.9
Average of live stock and crops			186.9

There is not much difficulty in finding the special causes of the high prices of beef. The free range has disappeared; government lands can no longer be fenced by cattle-rangers; the old ranges have been taken up and cultivated as farms; and the future supply of cattle must come from the stock produced in connection with general farming. The old sources of supply of cattle can no longer be counted on. Moreover, in 1906 there was a rush to market cattle and the general decrease in the existing supply in that year was

felt for a long period. In addition, the doubling of the price of corn and oats, the high prices of alfalfa and hay, have very greatly raised the cost of feeding cattle before they are sent to slaughter. The price of fed cattle is the highest on record. If so, the wholesale and retail prices must rise in proportion. The recent somewhat hysterical boycott of meat cannot change the underlying cause of the high prices of farm products, including meat. By refraining from eating high-priced meats a consumer can lower his expenses, but not the general level of meat prices. It is possible, however, for him to buy cheaper cuts, and learn how to prepare nutritious food by more skilful cooking. In the choice of our dietary there is certainly a wide margin for saving without loss—or even with a gain—in nutriment.

In the group of food products we find frequent and extreme fluctuations of prices. Since these changes are so evidently due to the abundance or failure of the crops in particular seasons, no one would for a moment think of assigning these changes to a change in the value of gold, which, at the best, can only be gradual and moderate and which is manifest only after a fairly long period of time. No one needs to be told that a failure of the wheat crop in Argentina will quickly affect the markets in Chicago and Liverpool. The changes directly referable to influences operating on the commodities themselves, such as good or bad seasons, are clearly seen in the price lines

drawn (but not here reproduced) for the following individual articles: cotton, cattle, flaxseed, hops, wheat, flour, corn, cornmeal, coffee, prunes, beans, apples, onions, rye, buckwheat, hay, potatoes, rice, and tea. In the whole period, 1890–1915, farm products have risen in price by 53 per cent., and food by 18 per cent., as against an average rise in all commodities of 22 per cent.

In general, this rise in the prices of food is an influential cause of higher prices in general, and is one of the "other things" which has been at work quite independently of the quantity of new gold. Moreover, the indirect effect of high prices of food produces the most serious practical problem. It wipes out all the gain of previous increases of wages, and drives laborers to repeat their demands for higher pay, thus working again to increase expenses of production. It is not too much to say that the gains of labor, shown by the fall in prices, as they stood about 1890, have been lost to us by the high tariffs of 1897, by the wastes of bad farming, and the recent high costs of agricultural products.

§ 2. Our analysis would be inadequate, however, if we stopped with an examination of expenses of production. The really practical problem is still before us in trying to analyze the forces at work fixing prices in that vague and dangerous margin between actual expenses of production and the prices in fact paid by

the consumer. It is in this margin that we find in operation the "other things" mentioned in Part I, b, 4), 5), and 6).[1]

The whole *raison d'être* of monopolistic combinations, for instance, is to control prices and prevent active competition. As every economist knows, in the conditions under which many industries are to-day organized, expenses of production have no direct relation to prices. In such conditions, there is a field in which the policy of charging "what the traffic will bear" prevails; and this includes industries that are not public utilities. It is obvious to every one that the seller is constantly trying to get the highest possible price. The buyers, as a rule, are a loose unorganized mass; while in these latter days the sellers are likely to be well organized. But even apart from compact organization, if the producers and sellers can control the supply, or create only a quasi-monopoly, they would have the unorganized consumers at their mercy. That is, we have here a cause working to raise the prices of goods whose expenses of production may not have been raised. Sometimes it is true that combinations by introducing new processes lower expenses of production; but by a greater or less control of the markets they are able to intercept for themselves some of the results of economies which, in a purely competitive régime, would go entirely to the consumer.

[1] See p. 79.

In the discussion of protectionism it has been argued that tariffs do not raise the prices of protected goods to the home consumer, because competition between the home producers will always prevent more than ordinary gains, and keep prices at a normal level. But when combinations succeed in controlling the price this is no longer true. Thus, the maintenance of monopoly prices becomes possible to the full extent of protecting duties, provided imports are prevented from competing with the monopolized products at home. An illustration in point appears in the duty on wood-pulp and paper, which has allowed the combination to control the price of printing paper to the American newspapers. And there are many similar cases.

The influence of the tariffs and of combinations in recent years is closely connected. The formation of combinations has been unquestionably one of the strongest forces in recent years working for higher prices. It is the one, better than any other, which explains the rapid rise in the years from 1897 to 1900 —the very years of the greatest activity in the formation of great "trusts," such as those in tin-plate, wire, steel, copper, and a long list of others. The very close relation of combinations to tariff duties makes the beginning of the great rise of prices which was synchronous with the passage of the Dingley Act, July 24, 1897, very significant.

As every one knows, combination is the order of the day, and it has affected nearly every article of

general consumption, among which may be mentioned anthracite coal, turpentine, jute, augers, axes, planes, files, hammers, door-knobs, mortise-locks, chisels, building materials, linseed-oil, furniture, tobacco, wire nails, petroleum, cottonseed-oil, lard, tallow, codfish, herring, crackers, glucose, barbed wire, molasses, salt, and pig iron.

Moreover, tariffs and combinations affecting raw materials have a pervasive and sinuous influence on the prices of related and finished goods. Combinations, or understandings, to control the supply price of coal, tar, hides, zinc, lead, copper, and other metals—as well as tin-plate, turpentine, cotton, dyes, and a great number of other commodities used in further manufacture—tend to increase the expenses of production of a much wider range of articles. In some cases, of course, the large-scale production introduced by combinations may enable the final unit of product to be sold at a lower rate; but such economies are frequently offset by the higher cost of materials as just mentioned, by the higher range of wages, or by other items entering into the expenses of production.

Combinations, therefore, have had an influence on the prices of so many articles as to give an impression of a general cause; but it is one quite independent of the demand for and the supply of gold.

§ 3. Moreover, rising prices due to high expenses of production, or to combinations of sellers, present a paradise for speculation (Part I, b, 6). A movement

upward based on facts can be easily converted into a further rise based only on speculative manipulation. A rise of prices which brings large profits to a combination thus directly affects earnings and gives especial opportunity to speculation in the securities of industrials. Hence, the field of speculation spreads from commodities (Part I) to securities (Part II). The facts as to the movement of prices of securities are well shown in collections of economic charts[1] since 1885; and, while the presence of gold serves as a fund of lawful money in reserves, the spread of speculation has gone on seemingly unaffected by the new supplies of gold. That is, speculative conditions may arise and disappear antecedent to and seemingly independent of the gold supplies.

It is clear that a sudden and extreme change of prices was caused by the crisis of 1893. There had been an expansion of demand based on fictitious assets. When the bubble was pricked, the supply of goods in general was in excess of legitimate demand, and prices fell. The lowest point of depression was in 1896, the year when liquidation had about reached its end. A part of the sudden rise of prices since 1896 is obviously due to the inevitable reaction from the effects of liquidation and to a return to normal conditions of credit and exchange. The recovery from speculative conditions and consequent depression soon brought the level of prices back to about that of 1890, before the

[1] *E. g.*, Brookmire's.

Baring failure in London (due to conditions in Argentina). There exists, therefore, the possibility of a great change in prices due directly to overtrading and an unsound expansion of credit, which has no causal connection with the existing stock of gold.

§ 4. We must remember, however, that the above conclusions have been based on an examination of wholesale prices. Yet the family buys at retail; and the forces bearing on the level of retail prices have a direct effect on the actual cost of living. Yet if the truth must be told, there are no reliable retail prices. They vary with the buyer's social position, the quarter of the city, the season, very often with the understandings and agreements between the wholesale and retail dealers, and those between the retail dealers themselves. In fact, one of the strongest holds the so-called trusts have upon prices is to be found in the agreements with the retailers to sell at a fixed price. Even the evolution of the cold-storage warehouses—like the use of certificates for wheat in elevators—has come to permit speculation, agreements, and the control of the supply, as in the case of eggs, poultry, fish, apples, and the like.

There can be little doubt that the retail organization by which goods go from the wholesaler to the consumer is needlessly wasteful and expensive. There are a score of butchers' shops and groceries in a neighborhood where only one is necessary. Each must

spend in advertising, in show-windows, in rents, in costly fixtures, in telephones, in wages, in horses and delivery cars much that is not essential to the total business done. Five or six wagons or cars, with salaried drivers, distribute trifling quantities of goods to houses in the same street. The consumer pays for this waste in the margin of retail over wholesale prices. From 1890 to 1908 on an average wholesale prices had increased 9 per cent., while retail prices had increased 18 per cent. The difference between wholesale and retail prices, in particular cases, varies from 10–25 per cent. to 100–150 per cent.

If one stops to analyze the process of retail buying, it will be realized that it is the seller who practically sets the price. There is no true competitive retail price. Busy or ignorant people pay what is charged them without the patience or the power to select. In these days we pay for the additional costs of dainty and attractive packages containing cereals, crackers, figs, and the like. Indeed, under the cover of special tins, an amount of an article is sold at a price which makes a pound cost two or three times as much as formerly. The psychology of the retail market is itself a study of no mean interest. Habit, fancy, caprice, rumor, emulation, gregarious action of a set, may play a part. Once a man gets established with a clientèle, he puts up his prices. He charges all he can get; and the confiding customer goes on paying the bills—until there rises a general cry of high cost of living, like that

of recent years. There are different retail prices for each half-mile as one passes from the centre of a city to its outskirts. Yet some persons think it demeaning to bargain or seek for lower prices. To spend recklessly is an evidence of what some regard as belonging to social position.

In the margin of the retail over the wholesale price, in a community not well shaken down into form, there is an opportunity for serious changes in the cost of living. Out of this margin, the catalogue houses, the wholesale grocery houses, the tea and coffee houses have accumulated great fortunes—at the expense of the helpless consumer. Then, what is the remedy? Obviously, the creation in every neighborhood of co-operative societies for the distribution of goods directly from the producer to the consumer at actual cost—obviating the waste of advertising, high rents, and useless duplication of service. It calls for social organization: a thing, of course, which is always slow of development because the Almighty made every man an individualist, who wishes each thing done to suit his individual tastes, and at the time and place to suit his pleasure. If co-operation succeeds, however, it will remove the wide margin of differential gains, which, lying above the actual expenses of production, afford an opportunity for combination and for manipulation to control prices. It may be said that the manufacturers and producers will refuse to sell to the co-operative societies under threats from the present

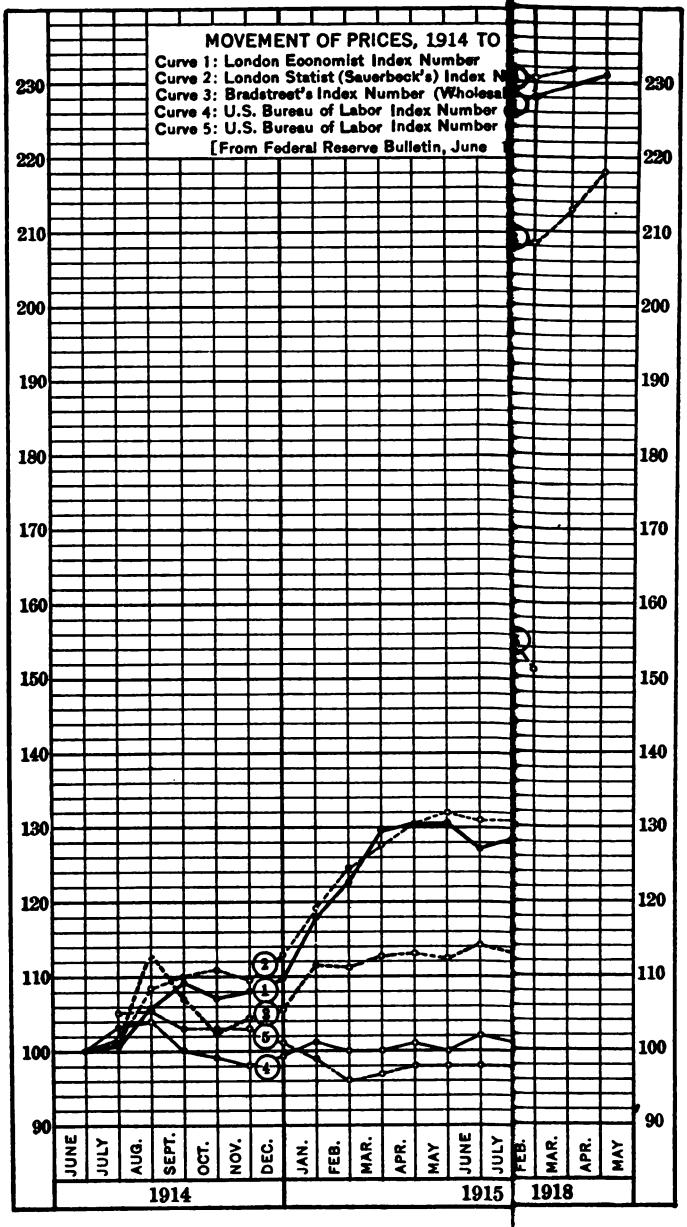
large body of retailers; but in the long run producers will arise wherever there is a sustained demand. And the success of distributive co-operation in England, where the societies buy largely from outside producers, is one of the reasons for the lower expenses of living in England than in America—apart from the fact that good, warm, woollen clothing is there no more than one-half what it is here.

§ 5. Furthermore (Part I, b, 4), we must face the fact of increasing riches not only in this country, but all over the world. New wealth makes a liberal spender. The retail dealer, finding his expenses increasing—and even when they are not—tries the experiment of charging his richer customers an increasing price. The newly rich pay and do not feel it. It must be admitted that, aside from the higher prices of many staple articles, our standard of living has changed with the growing wealth of the country. Each family now wishes more expensive food, better clothes, more costly millinery, more pictures and books—and those of a higher price—more bicycles and automobiles, more horseback riding, more travelling, stays at higher-priced hotels, passage on more expensive steamers, than formerly—all to keep up in the procession with the successful rich, who are increasing enormously in numbers. Every one expects, as a matter of course, to buy fruits and vegetables out of season—such as a very short time ago were considered within the reach

of only the largest purses. Our kitchen economy is quite too wasteful; we throw away fats and buy lard to take their place. But what can the poorer unorganized buyer do when retail prices are raised? What can he do if his meat bill, or his plumbing-repairs bill, rises enormously? The extravagance of the rich has generally raised the standard of expenditure. Those of smaller income find they also must pay the higher prices. Thus we have reached a point where we have to pay almost whatever any one asks. Organized buyers are the only offset to organized sellers.

§ 6. In conclusion, we find that under the same general forces—although acting in different combinations at different times—we have had falling prices before, and rising prices since, 1896. It may be said that new gold increased bank reserves, made possible enlarged credits, and so worked for higher prices; but this influence must have been as active in the earlier as in the later period. Therefore, even if we should admit that the flood of new gold has finally begun to lift somewhat the level of prices, it could not be the cause of the changes which have to-day so thoroughly aroused public attention. The rise of prices now most discussed, such as those of farm and food products, is due to special causes, and not to gold. Part of the sudden rise of prices since 1896 is obviously due to the reaction from a time of depression; but the period since 1897 is one in which business organization has

in the main taken on new form, and in which prices have been under powerful control. Moreover, special causes, such as high tariffs, agricultural readjustment, higher wages, and increasing expenditures of the rich have operated to raise prices. The resultant seems to be the outcome of special forces on the goods side of the price ratio working to raise the prices of goods, more than inventions and progress in the arts have been able to depress them. In this respect the later differs from the earlier period. Gold, in the sense of riches, may be the root of all evil; but gold, in the sense of a standard of prices, cannot be the sole root of the evil in our increased cost of living.


MOVEMENT OF PRICES, 1914 TO
Curve 1: London Economist Index Number
Curve 2: London Statist (Sauerbeck's) Index N
Curve 3: Bradstreet's Index Number (Wholesa
Curve 4: U.S. Bureau of Labor Index Number
Curve 5: U.S. Bureau of Labor Index Number
[From Federal Reserve Bulletin, June
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JUNE
JULY
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MAY
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MAY
1914
1915
1918

CHAPTER V

THE EUROPEAN WAR AND INFLATION

§ 1. As used in popular discussion, there is very great ambiguity as to the meaning of the word "inflation." It may refer only to the quantity and character of the circulating medium or it may be used to cover an expansion of credit by banks or by the government. In either case it is frequently assumed to have a necessary connection with the general level of prices. For the sake of clearness we may first confine ourselves to the subject of the currency.

In the past it has been generally accepted that a convertible paper money cannot depreciate below the exchange value of the precious metal into which it is convertible. There are those, however, who believe that the very increase itself in the quantity of money (whether convertible or not), whether gold or paper, may cause a rise of prices—which is the same thing as saying that the money has depreciated relatively to goods. This point of view is the old one of the time of Lord Overstone in England, and of Amasa Walker in this country.[1] Recently, this position has been as-

[1] *Cf.* Laughlin, *Principles of Money*, pp. 260, 268. Modern theorists might well note Lord Overstone's position: "It is not unnatural that a tendency should arise to conclude with too much haste, . . . that fluctuations in the amount of the circulation are the immediate and only cause of *all* fluctuations which may occur in prices" (*Tracts*, etc., ed. McCulloch, 1857, p. 205).

sumed by Irving Fisher, an extreme follower of the quantity theory of money, and a theorist of the mathematical school. He claims that the events of the European War have already (1918) disproved the principle that convertible paper cannot depreciate below its metallic base. The facts as to an increase of the circulation in various countries are cited, then attention is called to the well-known rise of war prices, it being taken for granted that the rise of prices is due to the increase of the circulation.

However this may be, inflation of the currency has been usually regarded as the consequence of such an increase in the quantity of a country's money as has caused its depreciation. (1) If this depreciation is relatively to gold, then something like inconvertibility must have broken the nexus between gold and the paper money. This has happened in Germany, which consciously decided to carry through the war on inconvertible paper. Not being convertible into gold, there has been no regulator of the value of the paper mark, and Germany is now reaping the whirlwind from her own sowing. (2) But if, as in this country, all forms of the circulation have been kept interchangeable with gold, then all considerations as to inconvertibility may be dropped from our discussion. If there has been a rise of prices, it cannot be charged to a depreciation of the currency relatively to gold. Yet it is very often said that there has been inflation in the United States.

§ 2. The issue, then, is clearly joined. Has there been a rise of prices since the war began and is this rise to be attributed to an inflation of our money, which all the while has been kept at par with gold? As to the rise of prices of certain classes of commodities there is no question; but as to the cause of the rise there is very much of a question. Also, as to an increase in the quantity of our circulation there is no doubt. Our increased supply of gold through imports has been phenomenal, thereby providing a solid base for the maintenance of our gold standard, even in the trying times of a great war. The gold reserves of the Federal Reserve banks have doubled within the last year. In addition, there has been a fourfold increase within a year in the Federal Reserve notes in circulation.

When we come to examine the causes for the rise which has occurred in the prices of goods since the war began, we find very little ground for assuming that it has been due to inflation, that is, to an expansion of the quantity of our money convertible into gold. Those who start out with the unscientific assumption that because of an increase of the money in circulation there must, as a consequence, necessarily have been a rise of prices, must be ruled out of court. To make such a claim is to grant the thing to be proved. Should there be a number of active causes working to raise the prices of many commodities—especially those demanded for war purposes—which are wholly inde-

pendent of the changes in the amount of our money, then it does not at all follow that our higher range of prices can be attributed to inflation.

Those who argue directly from an increase of the circulation to a rise of prices seem to ignore a whole set of causes affecting prices of goods which are well known to business men, and which are yet in no way connected with the circulation. The economic theorists who find prices are affected directly by the quantity of money—or the demand for money as compared with its supply—have no place in their philosophy for such a cause of rising prices as an increase of wages for the same—or less—labor effort. To be oblivious to the effect of higher wages on the expenses of producing goods and hence on their prices, must seem almost incredible to the practical men of affairs who are to-day managing our industries. If there is any one thing of common observation which needs no proof it is the fact of a sharp rise of wages for all kinds of labor in every part of the country unaccompanied by a corresponding increase of effort in time or efficiency. Is it possible that any one denies that an increase of wages, other things being equal, raises the selling prices of goods? Any one not blinded by a preconceived theory can see examples every day that such is the case; and yet the abstract theorists go on saying that prices are affected only by forces working on the supply of and demand for money. It is little wonder that such economists are distrusted by practical business men.

§ 3. In trying to see how much the actual rise of prices during the war has affected the cost of living, we should examine the movement of retail prices. Wholesale prices cannot be used in working out the effect of changes in the family budget. In a working man's budget the rise of prices from July, 1914, to November, 1918, showed the following effect on the cost of living:[1]

Budget items	Relative importance in family budget	Increase in prices during war period	Increase as related to total budget
All items	*100.0%*		*65.9%*
Food	43.1%	83%	35.8%
Shelter	17.7%	20%	3.5%
Clothing	13.2%	93%	12.3%
Fuel, heat, and light	5.6%	55%	3.1%
Sundries	20.4%	55%	11.2%

Thus in the price column it will be seen that food and clothing were the items which rose most. In clothing, woollens rose 100 per cent. and cottons from 87 to 264 per cent.

In studying the causes of this rise of prices, especially as regards food and clothing, scarcity conditions, as well as higher wages, were obviously at work. The supply of hides and leather, for instance, became so reduced that they came to have a scarcity value. The effect has been to raise the prices of shoes 76 per

[1] From *Wartime Increases in the Cost of Living*, issued by the National Industrial Conference Board, Boston, Mass., February, 1919.

cent.; since the increased demand for soldiers' equipment has operated on a reduced supply. The withdrawal of men from the farms has produced a scarcity of food in all countries directly engaged in the war. Hence the extraordinary rise in the prices of wheat, corn, oats, and all breadstuffs. Materials needed in shipbuilding, in the manufacture of munitions of war, lumber, steel, copper, manganese, and the like, have been obviously raised in price because of the war demands. It is not necessary to extend the list of materials whose prices have patently risen for special reasons having nothing whatever to do with the quantity of our circulation.

Moreover, all ocean freights have risen prodigiously, and thus increased the costs of all imported material and food products. The cases are legion where vessels have been furbished up and have almost paid for themselves on one voyage because of unheard-of charges for freight. Could any one in his senses suppose for a moment that scarcity of shipping and high rates of transportation were due to an abundance of money in circulation? Sudden and unexpected war demands for goods and ships have come simultaneously with a diminished production. Why charge up to the circulation what is traceable to the submarine? Abstract theory can easily be pushed too far.

All this exposition goes to show that the view that our higher prices are due to an inflation of our money is not supported by sound reasoning. The price of a pair of shoes is the quantity of gold for which it will

exchange. If the expenses of making shoes increase, the quantity of gold required to buy the shoes increases. The cause of this rise lies in conditions affecting the shoes, not in those affecting gold. The insufficiency of the quantity theory of money lies in its inability to account for important forces working on the prices of commodities through the commodities themselves. If, then, this method of reasoning is faulty, it is improper to claim that our higher level of prices is due to inflation.

§ 4. It may be said, however, that higher prices have appeared in all the belligerent countries, and that it is in these very countries where the quantity of money has been vastly increased. In fact, it will be found that, except in England, European nations have left the gold standard and that their depreciated paper would in itself bring in *pro tanto* higher prices. It is not so with us. Such increase of our money as has taken place has been almost wholly in gold or in Federal Reserve notes largely supported by gold. This gold has come to us mainly from Great Britain. If the coming of this gold has been the cause of high prices in the United States, then the loss of it to Great Britain should have lowered prices there.

Unfortunately for this sort of theorizing, British prices have risen more than 100 per cent. The change in the level of British and American prices is shown in Chart V. To the practical mind it becomes perfectly

clear that higher prices in Great Britain and the United States are to be attributed, not to the going or coming of gold, but to war conditions which have brought scarcity and higher expenses of production of goods. Such forces have, undoubtedly, been working in Germany and France, in addition to those arising from the depreciation of their paper relatively to gold.

It is a mistake to generalize from the experience of Continental countries to conclusions in the United States. Attempts have been made to collect the data for increased paper issues in Europe and thereby to explain the higher prices as a result of expansion. In truth, expansion in Europe has followed inconvertibility in gold, and, therefore, depreciation has been accelerated by increasing issues. There is no such situation in this country. Our prices are gold prices. It has been a tremendous—sometimes, perhaps, an unappreciated—advantage to have had this great influx of gold. It is our rare good fortune to stand solidly on a gold standard, and to be saved from the ruinous losses of a fluctuating paper standard while engaged in the greatest war of all history.

So long as our prices are gold prices their changes will be due to inevitable natural causes, which will adjust themselves automatically in the transition period after the end of the war. If this is inflation, let us have more of it.

§ 5. The fear of inflation, as recently presented, seems to have its support mainly in a supposed expan-

sion of banking credit. Here also the evidence of the existence of inflation is assumed to be a rise of prices. Hence, if it is impossible to show a strictly monetary inflation as a cause of rising prices, it is claimed that such a rise must have been due to an inflation of credit. To those unaccustomed to think in the fundamentals of credit, this theory is likely to be much the more plausible. In this point of view the test of inflation is a rise of prices. As we proceed in our discussion it will be clear that a wrong test of banking inflation has thus been applied. Even at the risk of repetition certain points should be here again emphasized.

In its most familiar form the theory of an inflation of credit resulting in higher prices is as follows: We have had a very great addition to our stock of gold. If this gold goes into our bank reserves, it will enlarge the power of the banks to extend credit. Hence, those who have larger credits granted them will have larger purchasing power, a greater demand for goods, causing thus a general rise of prices through an expansion of credit.

In this way of thinking there are two fundamental errors. In the first place, there is the same error in regard to credit that there was shown to be in regard to the circulation. It is quite one-sided to reason from a rise of prices to an inflation of credit, because it is wholly inadequate to argue that prices are fixed only by purchasing power. Demand has an effect on prices, it is true, but so have supply and changing expenses of production of goods. The utility of a hammer is

very great, but a millionaire does not pay more for it than a price corresponding to its expenses of production.

Thus there are factors touching prices of far greater practical importance than the purchasing power, or demand created by credit. Attempts of a theoretical character have been made to show by statistics a correspondence between the volume of money and credit on the one hand and changes in prices on the other. To compare only the statistics of money and credit with the movement of prices is assuming the validity of the very theory which it is attempted to establish. If one were trying to find the causes of the change of prices statistically, then let there be included in the investigation all the data about labor, wages, efficiency, costs of materials, freights, skill of management, machinery, new processes, taxation, insurance, and the like which enter into the expenses of producing every known commodity. The causes affecting prices are too numerous to have them set aside for a single factor such as the expansion of money or credit.

§ 6. The second error resides in a misunderstanding of the relation of bank reserves to loans. It is true that when a loan is granted the bank creates a deposit liability on which the borrower can draw; and a certain percentage of reserves to these demand liabilities, based on experience or law, must be kept. That, however, is not all of the matter. On what does

the lending power of a bank depend? Not on its reserves at the moment, but on the character of its assets. If the bank has liquid commercial assets in its loan item it can, through rediscounts at its Federal Reserve bank, increase its reserves at will. It is not true, therefore, that a bank is limited in granting credit by the amount of specie in its reserves. Likewise it does not follow that, because large imports of gold have poured into this country—due to exceptional exports of war goods and food—there must be an expansion of credit by the banks. The error lies in centring attention on the specie reserves rather than on the quality of assets. In fact, before the floating of our last loans bankers of the highest standing said there had been no inflation of our credit.

Suppose bank reserves increase. Is that a reason why a loan is made? Not at all. In legitimate banking a loan is granted only if the asset behind it is sound and secures the repayment of the loan. Such loans on liquid assets take care of themselves and can be largely increased without risk. The greater the quantity of staple, salable goods produced and sold by a firm, the more credit it can obtain from a bank. Loans are not properly made because reserves are large, but because good assets are offered.

If an increasing amount of good loans is offered, banks then see to it that reserves are kept up to the limit set by law or experience. The true order of events is as follows: Transactions in goods, then loans

based on their movement and sale, and, finally, the accumulation of a proper reserve. As compared with forty years ago, the loans of our national banks are at least six times as large as then. Does that imply inflation of credit? By no means. It indicates that the production and exchange of goods has increased many-fold in our country and that a correspondingly increased basis exists for sound credit at the banks.

This brings us to see very clearly that the test as to whether inflation of credit exists or not is to be found in the quality of assets accepted for the security of loans at our banks. In proportion as staple goods are produced and sold and loans thereby asked, credit can be extended without any question as to inflation. When loans are granted on assets that are not liquid, that have no immediate price in the market, that cannot be realized on to pay off the loan at maturity without loss, to that extent there has been inflation of credit. Such a test is a radically different one from that proposed by the theorists who find it in a rise of prices. They hold that an increase of credit increases purchasing power or demand, and thus raises prices. But I have already explained that supply or expenses of production of goods also affect prices. To talk only of demand or purchasing power is one-sided and inadequate.

No matter how large the increase in the production of goods, the increase in credit can go on *pro tanto* without affecting prices. By presenting a claim on

goods as the basis for a loan a borrower gets these goods coined into a means of payment by a credit at a bank on which he can draw. By extending such operations to most marketable goods one man's purchasing power is offset against the purchasing power of another, and thus balanced all around; so that there is no reason for a rise of prices due to this process of balancing payments by bank credits and checks.

§ 7. In the time of war, however, there was an obvious demand for credit in those industries providing munitions of war. Just as more goods are produced than before the war there may be a new demand for credit, but if the new goods are sold and soon paid for the assets are liquid, and there is no inflation of credit. It is seen, of course, that more means of payment were called for in these war industries—and high war prices made the figures of the same quantity of goods mount higher in accounts. But such a consequence did not necessarily require more forms of money in circulation, except perhaps for pay-rolls on higher wage scales. It depends on the business habits of the community whether accounts are settled by checks drawn on banks or by passing actual money from hand to hand. If, as is the custom with us, the proceeds from the loan are retained on deposit and only checks used, then the fabric of credit will increase just in proportion to the increased work to be done. And our stock of gold is so abundant that there

can be no trouble in finding the required reserves. The only question is as to the quality of the assets.

But the conditions arising out of the war created a desire for some new form of credit institutions which would grant aid to industries engaged in supplying the government with munitions, ships, transportation, and supplies. Hence came the passage of an act creating the War Finance Corporation. In regard to this institution more or less fear had been expressed that it might lead to inflation. This result could happen only if its loans created demand liabilities supported by unliquid assets.

The corporation was expected to supply a need, not furnished by the Federal Reserve banks, for loans not supported by commercial assets, but by bonds and various kinds of securities. Evidently these assets differed in kind from those acceptable at a Federal Reserve bank. For these loans the corporation issued a liability in the form of a bond running from one to five years. The obvious danger lay in the kind of assets accepted. It looked on its face like a lowering of the standard of credit, somewhat after the fashion of the Darlehnskassen in Germany, which have relieved the Reichsbank of loans on securities of a certain kind. But to give these bonds of the corporation indirectly the advantage of cash to borrowers they were (by a violation of the original principle of the Federal Reserve Act) made by law equal to eligible commercial paper, when paper secured by these bonds was presented by

member banks for rediscount at a reserve bank. Here was a possibility of inflation; and much depended upon the judgment of the directors of the corporation in accepting these assets. These long-time assets should not have been mixed up with the legitimate short-time paper of the Federal Reserve system. For thus there might be an issue of notes not based on liquid assets.

§ 8. Finally, much has been said of inflation due to loans granted by banks to pay for liberty bonds. Loans to a subscriber who expects before their maturity to dispose of goods or property to pay for the bonds are not a form of inflation. Loans, however, based on no likelihood of coming into the possession of goods or cash are clearly unsound, and tend to inflation. But in all cases where the subscriber borrows with the purpose to save, to reduce his consumption of goods, he pays at the maturity of the loan the equivalent of goods obtained by saving. This is the best of all the uses of credit, and one to which no taint of inflation attaches.

It seems impossible to find any convincing evidence that our credit has been so expanded as to have resulted in a rise of prices. There has been a rise of prices; but this rise has been fully accounted for by forces affecting the supply, or expenses of producing goods, rather than by those touching the demand, or purchasing power, offered for goods.

CHAPTER VI

CAUSES OF AGRICULTURAL UNREST

§ 1. Having stated the principles underlying the fixing of prices, the general forces at work in connection therewith, and their concrete working in the explanation of prices from 1850 to 1918, we are now in a position to study the application of monetary principles to practical experiments in this and other countries. One of the most interesting of these has been the examination of economic causes in the prices of agricultural products, which has raised a question as to the psychology of agricultural unrest.

A traveller following the path of La Salle across the plains of the Illinois to-day would be struck, even on the most superficial survey, by the signs of agricultural prosperity. Broad farms, substantial buildings, bursting cribs, fields drained with tile, and every evidence of good farming are visible. Some of the original settlers, moreover, have won their fortunes, and retired to the neighboring towns to spend their years of rest. It is not uncommon to find men who have amassed fortunes counted by hundreds of thousands of dollars. Iowa, also, is certainly to-day a successful farming community. And wherever a man of executive ability and training in farming has early taken up

agriculture upon a good soil, there comfort and prosperity were pretty sure to be found. But there is another side to the picture. A fire lay somewhere below all the Populistic smoke which arose from the granger agitation and rolled ominously over the skies from Chicago and St. Louis during the campaign year of 1896.

Behind the political evolutions of the parties which marshalled themselves under the leadership of Mr. Bryan there have been some forces at work which it may be interesting to record. The fact that so many delusions could result in a kind of political unity, and could produce common political action, itself demands explanation. In truth, the earnestness of great groups of fanatical men in the Chicago convention of 1896 had even a touch of pathos about it, the more that they were evidently sincere and honest. They represented, however, certain strata in our economic and social organization. Throughout the newer States we find a widely spread class of undereducated, vigorous, earnest, but narrow minds. There is little pliability in their mental processes. Once the single-ideaed brain has been occupied by a theory, or craze, the gate to all other ideas is thereby closed. In a brain incapable of economic and judicial reasoning, the one idea now in possession engenders prejudice, and even, in an emotional nature, frenzy. This class of minds may not always have the same craze, but, in its undereducated way, it is sure to have one of some sort.

The subject of the fanaticism may change in time, but with fanaticism we must always reckon so long as the undereducated class exists and wields a large political power.

The honest but narrow mind is ever the prey of knaves. The cheat plies his trade among the untrained so long as the eternal-gullible maintains its seat in the human heart. For the thriftless incapable there is purposely framed a scheme to make something out of nothing, which often appeals to the naïve honest as the cloud of fire by night guiding them out of the desert. Thus two general classes—the gullibles and the manipulators—both hoping to acquire riches by legerdemain, by tricks of legislation, come to work together for a common aim. The honesty of the one is the mask for the dishonesty of the other; and they are stimulated, in the attempt to rub the lamp of fortune for the sake of obtaining sudden riches without the sweat of the brow, by the picture, familiar to us in the rapid development of a young country rich in varied resources, of men of their own undereducated kind who have stumbled upon great wealth. The man who for years has been eating his bacon over a deposit of petroleum, coal, copper, or gold, awakes some day to great wealth, puts on the fine linen of civilization, and stands forth as the possibility of what may at any moment come to every other one of his kind. Cupidity nudges the elbow of fanaticism. While this human quality is not confined to any particular part of our

country, yet in the newer States there is an energetic restlessness in urging a peculiar nostrum to which the older part of the country is a stranger.

The narrow mind—like a popgun in which the last wad shoots out the first—honestly holds to its one idea, but this idea is driven out by any new agitation strong enough to force in another idea which may displace the old. The old greenback delusion, following the commercial crisis of 1873, flourished on this same mental quality. The optimism of the Western spirit had created cities like Chicago, and it even built the palaces of the White City, but in feeble intellects this optimism is the spring to many harmful kinds of activity. In its expansive way it sees results before they have gone through the formality of taking place. The mere possibility of borrowing is itself almost the realization of brilliant dreams. The possession of a loan is a ladder to the pinnacle of life. The return of the loan to the lender and the way down the ladder again find no place in the imagination of the borrower.

Such is the background of my picture. We can see the characteristics out of which a certain kind of results will surely come. The greenback craze was the outcome of a depression following a long period of extraordinary inflation and speculation after the Civil War. When the bubble burst, in 1873, business disasters were not confined to the farming class. Expansion of trade, inflated prices, airy ventures of all kinds, collapsed and brought down men of affairs in every

occupation with pitiless impartiality. The farmer, having taken a flyer for large sums when all the world was booming with speculative schemes of development, suddenly found himself prone on the ground, with his flying-machine lying splintered and ruined beside him. But in this fate he was in company with men engaged in all branches of manufacture and trade. It is in such a soil, composed of the débris of speculation and overtrading, that a crop of weedy delusions is sure to grow. It is commonly known that the years succeeding a panic are the ones in which quack remedies for industrial distress find many gullible victims. Untrained in economic reasoning, inexperienced in industrial history, untaught in penetrating into the causes of commercial phenomena, the undereducated man is the prey to the first nostrum that happens to be offered him. His distress pinches. How easy to believe the dogmatic assertion that the cause of his distress is the "scarcity of money!" Why not? He knows precious little about the principles of money. Why should it not be that, as well as something else of which he knows equally little? It is all mysterious, anyway. He must believe the statements of the man who first gets his confidence. Therefore, in times of industrial depression we have always had an epidemic of crazes. We know that in many former depressions the remedies proposed have had nothing whatever to do with silver, which in 1896 appeared as the sovereign cure. In 1874 it was a greenback wad

in the popgun; since then the silver wad had driven out the greenback wad. In both cases, from a scientific point of view, it was clear that industrial disaster was due to trading beyond all reason and judgment, and that the quantity of money did not determine the quantity of goods and property in existence.

Of course, the farmer who has overtraded, or expanded his operations beyond his means, is affected in a time of commercial depression just as is any one else in like conditions. After 1873 he probably found himself in goodly company; but certain difficulties arising in the eighties and continued into the nineties seem to have been limited to farming. It is quite certain that at that time special conditions surrounded the farmer and placed him in a peculiar position—conditions which were not common to men in other industries. If a period of overdevelopment, confined almost entirely to agricultural interests, was followed by the inevitable reaction, we may expect to see all the evidences of distress in rural communities which follow in the wake of a general commercial crisis; and we may expect to find also that nostrum-mongers have come to the fore, charming and deluding the honestly distressed farmer with the magic of their patent remedies. It boots nothing that the diagnosis is wrong, or that the medicine is unfit; the mind of one idea, by its nature, is hospitable to the first comer, and prejudice closes the door to the advice of the trained physician who arrives later.

In the genuine Populistic programme silver played but an unimportant rôle. For political purposes, it was skilfully made the common basis of action, in the campaign, by different groups of persons. Yet it was less hungrily demanded than inconvertible paper, or the subtreasury scheme, or greater freedom from the militia, by the mind of the true Populist. In short, the conditions of agriculture have permitted the growth of numerous crazes, of which silver is not even the tallest weed in the garden. Behind silver lies a whole thistle crop of ideas, with which we must eventually deal. We shall have to face various schemes of redistribution of property, even after the silver question has gone to its long home with the greenback. A craze is the inevitable manifestation of an idea strongly held by undereducated men. If it is not the greenback craze or the silver craze, it will be some other.[1]

§ 2. While understanding that vagaries are prolific in a season of financial distress, the essence of our inquiry is to discover the causes which brought about this situation of hardship. To one who has watched the larger industrial movements of recent decades it is clear that very powerful currents have been set in motion, the force and direction of which may be unknown to the very persons who are unconsciously carried along on their surface. In this study it may be

[1] For the psychology of inflation movements in more detail, see M. S. Wildman's *Money Inflation in the United States: A Study in Social Pathology* (1905), pp. xix, 238. Putnam's, New York.

possible, so to speak, to cast some sealed bottles into the currents, and thereby record their trend and force.

We were then witnessing in practical operation in the United States a difficult adjustment of the farming industry under an economic principle as old as Ricardo. If only for geographical reasons, the newcomers to an unsettled country originally plant themselves upon the soil most conveniently situated to harbors and rivers, irrespective of the fact that soil much richer and more fertile lies in the interior. The poorer soil accessible to transportation is, in fact, the richer soil to the settler, who is saved the sacrifices of a location distant from the market. So long as water furnished the arteries of transportation and trade, settlements were placed upon seacoasts and rivers. Rich farming communities spread over the outlying districts adjacent to these settlements. The thin soil of New England once masqueraded in the guise of a prosperous farming district, but that is now a thing of the past. And when Mr. Whittier mourned the decay of the farm and of rural life, and the departure of the ambitious boy to the town or city, he touched with song the hard facts of an economic revolution.

The same pitiless wave which swept over Great Britain in the latter part of the last century, spreading confusion and disaster in English farming, reducing prices of farm products, shrivelling English rent rolls, changing the character of agriculture in many districts, spread its influence also over New England and

the rest of the Eastern States—a wave set in motion by the progress of the age, by the railway and the improved steamship. Its immediate effect was to bring the products of new, distant, and vastly richer farming land into the same markets where the products of the old and poorer soil had been sold. In economic phrase, it was the insertion into existing grades of cultivated land of new grades of higher fertility. Consequently, if the required supply of food could be produced more cheaply by the new and better soils, the old grades must go out of cultivation. It mattered not, in the inevitable onward sweep of this evolution of the fittest instrument of production—bringing cheaper food to hungry legions—that the owner of the old farm had attachments of heart and association to the old lanes, the old trees, and the old blue hills. The progress of the age was under it all, like a ploughshare upturning the nest of his youth.

The railway and the steamship have not yet ceased their iconoclastic operations. A few years ago, the varied expanses of middle New York and the broad valleys of the Susquehanna made up the flower of our farms and gave solid incomes to their owners. This state of things is now of the past. Farming is no longer as profitable in these districts, because more fertile though distant lands have been brought within reach of markets. The richer wheat land in the Middle West, and of the prairies of Minnesota and Dakota, lay untouched until the railway opened up a cheaper

transportation to the lakes and seaboard. The cause of the enforced agricultural readjustment in the United States was the progress of the age, represented mainly by the modern railway. The fall of railway rates to less than one cent per ton per mile, and the generally dubious condition of railway securities as investments, were glaring evidences of the pressure to secure cheap transportation in the exploitation of the West.

It is a strange development—indeed, a curious travesty on justice—that the railway, which by reason of its low cost of transportation has practically destroyed the farming interests of the East, should be regarded by the farmer of the West as the vampire sucking out the blood of his agricultural profits; and yet the Western lands could have been opened to seaboard markets only by means of it and its low rates. The Eastern farmer must justly regard the railway, and the resultant competition of the richer farm-land in the West, as the cause of his ruin and the force which has driven him to new employments; yet the Western farmer would not now be in existence if it were not for the railway. The proof that it has served the Western farmer well is to be found in the sad ruins of Eastern agriculture. But by such revolutions is the progress of invention marked. Every great improvement which has cheapened the cost of reproducing existing forms of capital has necessarily lowered the value of earlier forms to the level at which it can be now reproduced. Ocean steamships which cost $500,000 each—and which could later

be built for $400,000—must have fallen in their capitalized value by one-fifth, or twenty per cent., irrespective of depreciation by wear and tear. In a similar way, the general introduction of steamships has lowered the selling price of sailing vessels. Every owner of capital in its various forms must always take the risk that invention may devise something cheaper in operation than his existing machinery.

§ 3. By the nature of his occupation, a farmer is subject to the foregoing principle quite as much as any owner of capital. His land may for the moment be the best in cultivation for wheat; but any conceivable discovery, or any improvement of existing devices, by which, directly or indirectly, new soils in any part of the world may be brought into competition with his own, must lower the price of his farm products. Wheat, moreover, is a commodity whose price is not determined by home, but by foreign markets. The wheat-growing farmer is, therefore, at the mercy of world causes and not merely of the domestic events within the boundaries of his own country. We ourselves do not consume nearly the whole product of our wheat or cotton land. We export largely beyond our own consumption. In 1896, out of a total production of 467,102,947 bushels of wheat, we exported 126,433,968 (27 per cent.), and consumed at home 340,658,979. In 1898, our exports of wheat rose to 40 per cent. of our production. It will at once appear to the reader

how surely the price of wheat must respond to influences quite out of the ken of the ordinary farmer, and yet that the continuance of farming depends upon his keeping careful watch of all the forces affecting his business, wherever and however they may be acting throughout the world.

The simple fact that we produce more wheat than we consume, and that, consequently, the price of the whole crop is determined, not by the markets within this country, but by the world markets, are sufficient to put wheat, as regards its price, in a different class from those articles whose markets are local. It differs very radically, for example, from corn: while we exported over 40 per cent. of our wheat crop in 1898, we exported only 11.14 per cent. of our corn crop, and in many years less than 2 per cent. Whether he knows it or not, whether he likes it or not, every man who chooses as his occupation in life the growing of wheat must be affected by everything which influences the production and price of that article throughout the entire world. And it need not be said that many wheat-growing farmers make little or no allowance for events beyond their limited range of local information. A good crop in Europe means a lessened demand for American wheat; a large European crop, accompanied by a very large harvest at home, is sure to depress the price abnormally; and if, in addition to these two uniting causes, competing countries in Asia, South America, Africa, and Australia send large quantities

of the same grain to Europe, the price may fall still further. A given demand may be more than met by an exceptional supply. It must then be remembered, too, that as regards an article of food like wheat, after a person has taken his usual quantity, his demand does not rise with a falling price, but, after a saturation point of desire is reached, it practically ceases altogether. This accounts for the extreme fall in price produced by a supply only slightly in excess of the ordinary demand. Does the farmer of our Western States study to adapt his supply to the known demand, as the manufacturer does? Probably not; he plants because he has wheat land, or because the price was high the year before, and leaves the rest to the mysterious play of forces outside his ken. Yet it is certain, nevertheless, that the price of his grain is determined by events in Australia, Argentina, Egypt, India, Hungary, and Russia, or by excessive rains in England, France, or Germany. To know the economic nature of the farmer's occupation is necessary to an understanding of his existing situation, and one can clearly see how varied are the world influences which may affect his efforts in growing wheat.

§ 4. The revolution by which invention and progress have forced a readjustment of industries, with a better relation to our natural resources, has wrenched the country and twisted it into new shapes. It has taken away the farming industry from the older States,

and given it to the newer territory where soils are richer. The problem left to the farmers of the Middle States is the difficult one correctly to learn the causes of the agricultural readjustment; to master the qualities of the old soil for other crops; scientifically to adapt the land to the new conditions brought by the opening up of new areas of superior soil. It is a problem requiring a high order of intelligence and scientific training in farming.

But a problem which under the most favorable conditions would be a complex and difficult one, is made far more serious by a movement which has taken away from farming the most enterprising spirits and the most vigorous brains. The movement of the better minds away from the farms to the towns, where a wider career is opened, is so well known to Americans that I do not need to describe it. Ambitious Americans have left certain districts of New England mainly to the small farming of the Irish and later to the Finns; and the Middle States have likewise enlarged their quotas in the towns. It is one of the most marked events in our economic history. The brightest youths speed to the cities as a matter of course.

But even if, with Mr. Whittier, we sing dolorously of the abandoned farm, we cannot fail to see above the horizon the expanding roofs of the manufacturing town and the glittering attractions of the greater cities. We must see also a larger power to purchase food and other necessaries in the wages of the daily laborer, graded

schools instead of the "district" schools, better drainage, better lighting, a larger nervous excitement, more stimulus to the average mind, a response to the offer of more intellectual tonics, a wider reading, and a more intelligent acquaintance with the lives and manners of cultivated persons. If the moral tone of the city and town be low, in all probability children there are safer than on the farm from vulgar vice, and from that inward moral starvation which follows upon a lack of mental nourishment. In short, when in some farming districts one notes the bad roads, the social privation, the lonely isolation of farm life, one wonders that there are any farmers. The movement to the towns is really an answer to a craving for something besides mere material existence: it arises from a delight in the society of others and in access to amusement and information; from æsthetic satisfaction and a general striving for the better thing.

The effect of these revolutions upon farming was that in those years when a great industrial readjustment was taking place which required the best efforts of the best intelligences, at the very time when the hardest problem was presented for solution, social forces were at work to take away the men best capable of solving the problem. Just as the situation became increasingly serious, the least efficient were left to meet it. It is not necessary for me to say, by way of qualification, that there are efficient farmers; of course there are. Wherever one finds executive ability and

training in farming, there one is likely to see success, as in any other occupation of life. But it is the purpose only to emphasize the general point, that from the nature of his occupation the farmer is subjected to world-wide operations requiring careful foresight; that the age is bringing him new adjustments and new problems; and yet that the concomitant part of the situation has been a marked reduction, due to the attractions of our cities, in the quality of farming skill and capacity.

§ 5. But the farmers on the richer soils of the trans-Mississippi States, although holding the coigne of vantage relatively to other farmers in this country, especially as regards wheat-growing, have been themselves affected by special influences of an unfavorable kind. In the years of prosperity after recovery from the panic of 1873, the Western farming districts suffered from a curious epidemic of farm loans, an unexampled prevalence of borrowing-made-easy. Eastern money-lenders sent unlimited sums, with reckless confidence, to be loaned on Western farm mortgages. So little discrimination was exercised in this expansive era that the droughty lands of Kansas and Nebraska were estimated to be as good security as the more trustworthy soil of Iowa and Minnesota. Methods of lending were careless; and the unwary met sad treatment at the hands of rogues, or fell victims to poor land titles. The abundance of loanable capital

set a premium on borrowing, and few farmers in need of improving their farms escaped the temptation. They were led into plans for expenditure without fully realizing the risks of farming, the operation of world causes upon agricultural prices, or the difficulties of repaying loans after they were spent.

When the country had recovered from the panic of 1873, the development of western Minnesota and Dakota entered upon a stage of speculative expansion quite as dashing and bold as any ventures of Wall Street brokers. Overconfidence was sublime. No other part of the country was comparable for sound investment to this wheat Eldorado; the East was a doubtful place for solid prosperity in comparison with this brilliant addition to our resources. Fortunes were to be made only in farming. Fathers bought shares in the ventures undertaken by their sons who had moved to the new West. Old residents of Ohio, Illinois, or Wisconsin sold their lands to join the great hegira. In its way it was as picturesque and exciting as any like event in our history; and it would not be easy to exaggerate the intensity of speculation in this period of the early eighties, soon after the resumption of specie payments.

This overdevelopment was to the farmers what overtrading is to the commercial world. The expansion having gone beyond legitimate bounds, the reaction was certain to come. The drought, hot winds, and consequent failure of crops, in Kansas and Ne-

braska, startled Eastern lenders into the discovery that the lands were in many cases valueless as security. The time for repayment of loans came around, and brought with it a test of the good judgment of the borrowers in the use of their loans. Bad judgment and lack of skill meant inability to repay. "Settling day" is in any market a solemn occasion, but in the case of farm loans it is sure to reveal all the weak spots. A vast deal of capital, of course, was properly lent, and wisely expended in improvements; but this was far from being commonly true. In justification of this statement it is necessary no more than to refer to the many failures of Western mortgage companies, and to the generally suspicious attitude in regard to their investments which followed. It is not implied, by any means, that there are not good Western farm mortgages, but only that the era of speculation was followed by the inevitable reaction.

Under the influences of this period farmers had borrowed, and pledged themselves to the payment of fixed units of money. While agriculture was booming, the ability to change wheat into these units for repayment seemed easy; and if this situation had remained unchanged all might have gone well. But there soon came a heaving of the calm sea, showing that storms were going on in other parts of the wide waters. As was pointed out, the world causes had to be taken into account. Just when the reaction in American farming began to set in, the distant countries of the

world, which had begun to send wheat to the same competitive markets, rapidly increased their exports. The sudden enlargement of the supply without any corresponding increase of demand produced that alarming fall in the price of wheat which has been made the farmer's excuse for thinking that silver is the magic panacea for all his ills. At the very time when the American farmer was under pressure to increase his production in every possible way, he was disastrously affected by a similar increase in other countries. In short, the agencies which opened up the superior wheat-fields of the Dakotas were not confined to the United States. The progress of the age in the form of cheapened railway transportation revolutionized the agriculture of our country; but likewise the progress of the age in the form of cheapened steamship transportation opened up to European consumers the superior wheat-fields of Argentina, Australia, Egypt, and India. Yet the Western farmer ploughed and sowed blindly, as if his were the only sources of wheat-supply in the world.

Here was the pith of the whole trouble with the farmer of the farther West. The boom and wild expansion consequent upon the settlement of the Dakotas brought about the inevitable reaction. The one serious difficulty to the sufferer was that there were special conditions, in a great measure influencing agriculture alone, which produced the same results that a violent commercial crisis produces in a wide range of

industries. To be sure, a disaster in farming conveys the impact of damage to other allied interests; but here were conditions, the results of seismic convulsions throughout the world, practically uncomprehended by those most deeply affected, and yet not directly touching other great industries. Forces special to agriculture, although moving all over the world, narrowed in upon our Western farmers, quite unconscious of the currents that were bearing them up and dashing them on the rocks. If we understand, then, that the agriculture of the Middle West had been suffering bitterly from readjustment; and more than this, that even the favored farmers of the richest land in the remoter West (whose success had ruined the Eastern farmers) had been suffering from a disaster not entirely of their own making, we may be better able to judge of their consequent unrest. They were in a measure responsible for the wild expansion of the early eighties, but they were to be judged leniently for their ignorance of those waves of damage which came from abroad.

§ 6. Feeling the coils of some mysterious power about them, the farmers, in all honesty, attributed their misfortunes to the "constriction" in prices, caused, as they thought, not by an increased production of wheat throughout the world, but by the "scarcity of gold." This seems hardly an adequate explanation, just at the time when the gold product was

doubling itself. If scarcity of gold had been pushing prices down, why did not an abundance of gold push prices up? This explanation of low prices as caused by insufficient gold is so far-fetched that its general use seems inexplicable. The existence of such a theory in explanation of the low price of wheat is so unnatural that it leads one to suspect the guidance of an interested and intriguing power. Therein is to be found one of the most interesting parts of that situation. The undereducated man, capable of holding but one idea at a time, and holding that idea fanatically, crushed by the coils of an industrial readjustment, with a system depressed by a speculative debauch, found supposed helpers in the wiliest managers who have ever entered American politics. This was, in a nutshell, the true philosophy of the movement in favor of free coinage of silver.

Given a large community with innate prejudices against the East, intensified by the dislike born of the relation of debtor to creditor, prostrated by the collapse of the greatest agricultural speculation of modern times, suffering from foreign competition in the world markets, the opportunity of the tempter was nearly perfect. And the skill of the tempter was satanic. I doubt if ever in our political history we have had more adroit manipulation and strategy than were displayed by the managers of the silver party. In Congress they were more than a match in plans and ingenuity for the leaders of the two great parties. Supplied with

abundant means by the silver mining interests, they "buncoed" one party or coquetted with another, as suited their interests. While extending their propaganda for years in the ranks of the Democratic party throughout the West and South, they bargained with the leaders of the Republican party in Congress for legislation favorable to silver in return for votes for special and private interests. It was in this way that the so-called Sherman Act of 1890 was passed. When they were given an inch they took an ell, until the country stood aghast at finding these silver managers holding the national legislature by the throat, and demanding silver legislation or a stoppage of all old "deals." It was a political brigandage that put the little byplay of Greek bandits to shame. A game of burglary like this in the Capitol at Washington was as audacious as the seizure of money-tills at high noon on a crowded street.

This, however, was but one part of the great silver conspiracy, the equal of which has never been recorded, and which is too considerable for me to do more than refer to here. It embraced in its plans years of systematic agitation of the silver doctrines, both by speaking and by writing, among those dissatisfied classes which I have described. The situation of farmers in the West, depressed after a collapse of a speculation in wheat lands, and of cotton-growers in the South the price of whose product also had been disturbed by world causes, was a rich soil for the silver

propaganda. It was begun stealthily and secretly, and carried on later with noise and open activity. Newspapers were hired to exploit and advertise silver literature in a way to enlarge their list of subscribers. A literary bureau controlled a systematic distribution of "catchy" and "taking" illustrated reading-matter. The prejudices and antagonisms of classes were appealed to most skilfully. The wheat-farmer and the cotton-grower were for years practically permitted to hear nothing else but the wrongs of silver, the evil effects of gold, and the grinding oppression of the money-lender. As a piece of successful political intrigue and agitation, this propaganda was probably the most effective since the repeal of the Corn Laws. One can have nothing but admiration for the consummate political skill displayed by the managers of the silver party.

How adroitly a situation of agricultural depression, due to an industrial revolution, has been made to serve the owners of silver, the presidential campaign of 1896 gave convincing evidence. At that time, silver was jangling in the ears of those who, a few years later, would have permitted only the music of some new craze to be heard. If the conditions which allow of delusions among the farmers were of passing duration, if in a few years we might see Western farming recover from its depression as easily as we see manufacturing and trade readjust themselves after a commercial crisis, the remedy would not be far to seek. But the

opening up of new wheat areas to European markets is not a thing that, rising like a wave, like a wave disappears; it is a permanent uplift of the sea-level. It has come to stay, and probably to rise still higher; indeed, some exceptional emergency like war may come to lessen foreign production and also raise the price of food. Farming will go on, and go on profitably; but it will never realize all the bright dreams of the ballooning years in the early eighties. How natural that the seeds of dissatisfaction should grow up in the various forms of protest against existing legislative and social arrangements! It was precisely the expansive, optimistic, speculating American-born in whose minds these erratic developments took deepest root. Our less mercurial Germans and shrewder Scandinavians were safer than our Americans in the day of crazes.

CHAPTER VII

SOCIALISM IN THE PRICE QUESTION

§ 1. In its essentials, the popular demand for free silver coinage was not an isolated agitation unrelated to other thinking of the past and present. Nor was it disconnected from the movements of the time which to the casual observer seemed quite separated from the monetary discussion. Through the proposals to obtain a larger supply of money, and through the expressed fear of a scarcity of gold, ran a philosophy of government which reappears in demands varied in their nature, but which are one and the same in source and spirit. Those who wish well to the republic may fitly inquire into these underlying currents which carry the people on quite unconscious of ultimate results. If our ship is to reach a predetermined port, we must daily take exact observations, watch the currents, and set our course by the compass. We can no more expect to have good government by meeting hard public questions by neglect or sentiment, than we can hope to sail a ship with children or invalids.

It should be remembered that in the same soil in which grew free coinage of silver, there also flourished paper-money expansion, loans by the government directly to the people, and state control of railways.

Through all of these ran a common principle. They were all varied expressions of the same point of view. We shall understand our political questions better if we grasp the deeper common cause which underlies many of these dissimilar demands. It will not be difficult to analyze the propositions advanced in past monetary campaigns so that their originating force may be distinctly understood, and their close relationship to other agitations easily seen.

Throughout past discussions on money runs the frequent and insistent demand for an abundant currency, for "more money," for money enough to keep up prices, and, as if prices depended on the quantity of money in circulation, a demand for governmental action such that prices may be regulated by controlling the quantity of money. This conception is by no means confined to Populistic platforms; it has been found in the writings of international bimetallists, who urged that we needed an addition of silver to our world's money because there was not enough gold to keep prices from falling. Here again is a plan to manipulate prices by legislative action based on the quantity of money. These positions are untenable, either from the point of view of the principles of money, or of the facts of our business life. In truth, the wide differences between money "doctors" arise from reasoning on an invalid basis of theory; moreover, if the premises are unsound, it is impossible that they should square with the results of actual experience. The

principles of money having been already given, it may be permitted to indicate here the reasons why a great deal of monetary literature (both on the gold and silver side) is incorrect and bootless.

If the word money is used in different senses confusion naturally arises. If prices depend on the quantity of money in circulation, by money do we mean only the quantity of gold which circulates in the United States? Or all the gold in circulation throughout the world? Or should it include all the media of exchange by which transactions are settled? Not even by authoritative writers on money is this confusion properly avoided. And for a good and sufficient reason. The simple and correct conception of price has not been always kept in mind. In addition, no proper distinction has been insisted on between the standard or common denominator, in which goods are priced, and the medium by which goods (after their price has been made) are, in fact, exchanged. This can be briefly explained.

In this country, where gold is the standard, price is the quantity of gold for which an article exchanges. The standard is not an abstraction, but a material commodity, in which price is expressed; price is simply the ratio between goods and gold. If the price of a horse, for instance, is $100, that is only a way of saying that the horse exchanges for the quantity of gold in $100 of our coinage. Should the horse go permanently lame, it would exchange for less gold; that

is, its price would fall. Although the fall in price of the horse arose from causes solely affecting itself and not gold, still it makes no difference whether we say that the horse has fallen relatively to gold, or that gold has risen relatively to the horse. The fact of a change implies nothing as to the cause of the change. To take another illustration: If nothing had happened to change the demand for, and supply of, gold, and yet if a new process had cheapened the cost of making steel, then the price of steel expressed in gold would fall. Hence it would result that gold had increased in value relatively to steel for reasons affecting only the steel side of the price ratio. In short, gold may increase in value if goods are cheapened in their expenses of production; but this fact may not be due to any cause originating with, or operating on, gold alone. Anything which increases or diminishes the demand for, or the supply of, gold, and anything which increases the expenses of production of goods, affects their price in gold. Therefore it is shallow to suppose that prices can be modified only by changes on the gold side of the comparison. And yet volumes have been written based on that error.

What has just been said applies not only to metallic money but also to paper money. Sometimes it is strongly urged that the value of paper money (and prices expressed in it) varies according to the quantity in circulation. Both principle and fact, however, are against this proposition. A paper money which de-

preciates, clearly acts to change the standard, and prices, in a cheaper standard, necessarily rise. Prices in a paper redeemable in gold would be the same as gold prices. Issues of paper money can change price only by changing the standard with which goods are compared. It is not the quantity, but the quality of paper money which affects price.

§ 2. The failure to distinguish between money as a standard and money as a medium of exchange has led to much confusion. It does not at all follow that the metal chosen by a country as its standard of prices is also much used as a medium of exchange in business transactions. After prices have been arrived at by a comparison of goods with the standard (gold, for example), a medium of exchange quite different from the standard metal is then often called into use. For instance, although we have the gold standard in the United States, over 90 per cent. of our wholesale transactions are settled by the use of the check and deposit system. Such a means of carrying through buying and selling, without the use of gold, is at once efficient and inexpensive; and it gives no warrant for assuming that as transactions increase the demand for the standard money increases. In Great Britain, also, an enormous commerce, vast quantities of exports and imports, and phenomenally large financial dealings, are settled with no more gold in reserve than could be supplied by the world's production in a single year.

The British have the gold standard, but use comparatively little gold as a medium of exchange, and that in small denominations. Banking facilities serve effectually as a means of settling vast transactions.

We are thus able to see that devices chosen as media of exchange, whether bank-notes or checks or bills of exchange, may rise or fall in amount without in themselves affecting relatively either the gold or the goods in the price ratio. If bank-notes are introduced they may to some extent economize the use of gold. But only as they diminish the demand for gold throughout the world would they thereby affect the world value of gold, and thus raise prices by touching one side of the price ratio. In general, however, the price ratio cannot be affected at any given time by fluctuations in the volume of the media of exchange within a country. Checks and drafts do not raise prices as a consequence of an increase in their quantity; in fact, checks and drafts originate as a result of transactions in goods, after their prices have been determined, and for sums exactly fixed by the previous dealings between buyers and sellers. Such media of exchange represent property expressed in terms of the standard, which property is then readily exchangeable against other property similarly expressed. The fact that sums of gold are held as bank reserves does not weaken this position.[1]

If we keep in mind that price is obtained only by

[1] *Cf. supra*, chap. III, § 6, and chap. V, § 6.

comparison of goods with the commodity used as the standard, and not by first ascertaining the volume of the media of exchange, we shall have advanced far in our understanding of monetary questions. Indeed, as already said, the media of exchange may rise or fall in quantity, without themselves affecting the general level of prices. It may be noted, however, that when gold is chosen as a standard instead of some other commodity, a demand for gold is thereby created and its value is enhanced. But only so far as gold is actually used as a medium of exchange in business transactions is this true. This use varies in different countries according to monetary habits. Hence it cannot at all be argued that, as transactions increase, there is a proportional increase in the demand for gold. In truth, it is the tendency of the age to use gold less and less as a medium of exchange. In order that gold should be increased in value (by causes directly affecting itself) it must be shown that an increasing demand should have exceeded the increasing supply. Without doubt there has been enough gold to meet the money demand and also to take the place of discarded silver. The low price of silver was the proof of an abundance of gold.

§ 3. A realization of the fact that a great and unparalleled increase in the supply of gold during the years from 1875 to 1895 had not been followed by a rise in prices, gave thoughtful men—like the German

economists, Conrad and Lexis—ground for a change of belief. They saw that as no rise of prices resulted from the phenomenal increase in the supply of gold, it could not be argued that prices had fallen because gold had been scarce. The facts, in short, were dead against comparisons between the mass of business transactions and the quantity of gold as a means of explaining the level of prices. This must be true, because the demand for and supply of gold do not include all the factors entering into the determination of price. The assumption of the international bimetallists, therefore, that prices have been lowered because gold is scarce, falls to the ground. It surely is bad reasoning to build a policy and dogmatically urge it upon nations for universal adoption which leaves out of account one-half of the factors in the problem and practically disregards the fundamental conception of price.

If, then, it should be admitted that prices do not depend upon the quantity of money (*e. g.*, gold) in circulation, then all the schemes to raise prices based upon this idea would be futile. The theorists of this school would not be able to raise prices merely by an increase in the quantity of gold; for this has been tested by the facts and found wanting. But yet where there is so much smoke there must be some fire. If there is so wide-spread a belief in the ability to change prices by the use of monetary legislation, there must be something in it. And there undoubt-

edly is. Any action upon the standard side of the price ratio which supplants a given standard by one of lower value, or which introduces a counterfeit presentment of the standard in paper which is not redeemed in coin and so has fallen in value—in either case, the standard being lowered, prices would be raised. That is absolutely plain. But that is a very different thing from raising prices by increasing the quantity of the standard metal. If we should lighten the avoirdupois pound by one-half, then a bag of flour which on the old scales weighed one hundred pounds, would mark off two hundred pounds under the depreciated standard. In a similar way, without changing the methods of production in the least, a cheapening of the standard money would raise prices. (Although it must be remembered that, as before mentioned, increasing ease in obtaining gold may be prevented from raising prices by lessened cost of production of goods, thus counteracting the effect of more gold and keeping prices low while gold is very abundant.) Prices in any country are no more determined by the quantity of gold in that country than is the price of wheat governed by the amount of wheat which happens at any moment to be stored in that country. It is the world's supply and demand which must be taken into account in fixing the world value of either gold or wheat. The value of gold in any one country cannot long deviate (friction to some extent apart) from the world value.

It is apparent, then, that the real purpose of the talk about increasing the quantity of money and thereby raising prices can be accomplished only by some action which depreciates the standard. To increase the quantity of standard money, without changing its value, would not affect prices expressed in that standard. It has been already shown how impossible it would be to affect prices by this partial means. Then, it follows that the free-coinage-of-silver or paper-money propaganda can effect its end of raising prices only by lowering the standard. That is the pith of a whole group of schemes which has arisen out of the money agitation. If this be admitted, the method is obviously fraudulent and dishonest; and many conscientious persons who hold the need for money to be imperative would be the last to continue to support it.

§ 4. But objectors may say that the case against the quantity theory is not fully made out; that it may still be true that prices are dependent upon the volume of the currency. It is known that the quantity theory has been upheld by well-known economists. Nay, more, many text-books of political economy teach it in more or less guarded form; it has been used in countless pamphlets and books to support the demand for additional issues of silver or paper whenever an author's statements could be quoted. Indeed, it is a common belief, assimilated into the consciousness

of the general public, that prices depend directly upon the relation between the money work and the volume of money in circulation (*i. e.*, not upon the ratio of goods to the standard, but to the quantity of the media of exchange). I believe this to be a theory not only unsound in principle, but also unsupported by the facts of trade and prices. However, let us grant its truth, and see what comes of it.

All prices do not move at any time either in the same direction or all together; some are rising while others are falling; some remain fairly stationary, while others rise or fall excessively. Indeed, there are countless influences arising in any one industry which modify its methods of production and sale and change the market price of its goods. Moreover, the business of a country often expands in special groups of industries; at one time (as before 1873) it may be in railways, at another (as after 1880) it may be in agriculture. When a crisis comes, it strikes most severely those industries in which there has been the most overtrading, while others suffer by sympathy, but less seriously. In short, any general level of prices is an average of all prices, some of which are high, some low. It is like speaking of an average height of soldiers in our army; it is an abstraction, not a fact. There is, moreover, a necessary opposition of interests; the woollen manufacturer, for instance, does not wish wool to be high in price, while that is exactly what the woolgrower earnestly hopes for. That is, a general change

of price would necessitate a readjustment of expenses to selling prices upon the new level, and the strong would gain at the expense of the weak during the period of transition.

But, as every tyro knows, after the new level of prices has been reached, every article bears the same relative value to other articles as before. The only change is in the number of price units in which goods are counted. During the process of change, however, from a low to a high level of prices, an alteration has been made of a serious nature in the relations between debtors and creditors. Indeed, the only lasting effect of a change in the price level is upon contracts and indebtedness. As a fall of prices inures to the benefit of creditors, a rise of prices would inure to the benefit of debtors. If it would be wrong to have legislation favoring the creditor class, so it would be to have legislation favoring the debtor class. If more money were to be issued by the state in order to raise prices, that would be legislation in favor of one set of persons at the expense of another set. But the disposition to concede legislative favors to debtors is in its essence an attempt by government paternalism to redistribute from those who have to those who have not. It is a means of supplementing individual incapacity and want of success by assessment upon the efficient and successful members of society. This is socialism pure and simple. It is following the tendency to look to the state for aid when individual

effort begins to be distasteful; it removes the incentive to industry from those weaklings who need to know that success is not the fruit of idling and shiftlessness. To let such as these feel that their inefficiency may be condoned by the collective efforts of society is to penalize thrift and put a premium on failure. To legislate in favor of the inefficient at the expense of the efficient is to put demagoguery on the throne and discourage the very qualities on which the stability and moral growth of society always has, and always must, depend.

Think of a civil polity which in the interest of one set of persons should undertake to regulate the prices of goods in the country's markets—whenever intemperate overtrading has been followed by a commercial crisis, or an abundant crop and a small foreign demand has lowered the price of wheat or cotton! If we are to enter upon that path, it is well to know whither it leads. One such step in socialism leads to another, and the outcome is the subversion of existing society. That may be a consummation to be wished for; but, at least, we should enter upon it with open eyes and understanding minds.

§ 5. In studying the outcome of the price question, we are finally brought to an obvious dilemma. On one horn we find that, if the quantity theory is unsound, then attempts to raise prices by expanding the currency will be futile; or, if prices are to be raised at

any cost, it can be done only by measures directed to changing the value of the standard itself in which prices are expressed. The last is a kind of open fraud such as was practised by bankrupt sovereigns when they debased their coinage to lighten their indebtedness, and would, in these days of light and liberty, be no more permitted to a sovereign people than it was in days gone by to a sovereign despot. Such measures would not be adopted on his own initiative by an individual man of affairs, because to compound, or to scale, his debts would ruin his credit and his business reputation; but should the state enable him, by an immoral law, to do legally that which he would shrink from doing on his own responsibility? Therefore, it is the more incumbent on the state in its legislation to strictly observe the right, so that it may not encourage immoral acts by its citizens through its own example.

On the other horn of the dilemma, if the quantity theory is sound, if it is possible to regulate prices by government control of the quantity of money—we have socialism pure and simple. Which horn shall we take? Shall we accept dishonor, or shall we disappear down the unknown path of socialism? One or the other must we choose, if the public is pleased to occupy itself in the future with the price question. Yet, if we think, if we see the repugnant outcome of this delusion, it should be unnecessary to choose either. And so soon as the forces operating on price are understood to be complex, and of a nature not to be in-

terfered with by legislation, we shall be freed from a dangerous agitation.

If we recognize the important socialistic element involved in the price question, we may readily believe that it was not merely an unshaken belief in the free coinage of silver which guided the votes of millions of our citizens in 1896. The general cause lay deeper than the superficial means used to satisfy the desire for state help. A demand for free coinage of silver was but one manifestation of a general conception of government. It was one evidence of the tendency to lean upon the state for outside help whenever internal character and ability failed to satisfy the cravings of the less efficient. Let the silver agitation die out—as it is likely to; but the underlying cause will still find some other form of activity. So long as the price question in any form keeps the stage, if it does not play the rôle of silver, it may appear in the guise of paper money. All that has been said applies equally well to a paper-money agitation. Consequently, the best means of overthrowing fallacious monetary argument of this kind are really to be found in methods which counteract the socialistic tendencies contained in it. The demand for cheap money in any form is an outcome of the desire to get rich without work, to get wealth without going through the necessary processes of producing it; or to arrange political legislation so that those who have produced largely shall be obliged to hand over a share to those who shrink

from meeting the exactions of the productive process. This is the originating motive behind the demand for a graduated income tax. Hence it is certain to appear in the same platforms wherein are found pleas for free coinage of silver, or for an expansion of the paper currency. These analyses explain, also, why, when prosperity returns, less and less is heard of all these nostrums; because, when it is easy for all sorts of persons to get employment and a means of subsistence, less urgent are the appeals to the outside help of the state. And with the certainty of the tides will they reappear on the return of a wave of depression following upon commercial expansion and overtrading. An understanding of these oscillations of prosperity and depression enables clever politicians to put themselves in front of the tide on an issue which appeals to the numerous but unthinking mass. So has it always been from the time of Cleon to the present day.

§ 6. The coming political issues in the United States are likely to be inspired more and more by the underlying causes which have given us free coinage of silver and greenbackism, but it does not at all follow that they will continue to be of a monetary character. So long as the price delusion remains, doubtless some phase of the money question will appear as a political issue. But this will not be the essential element; sooner or later, the United States must face the inevitable political issue between the socialistic and the

non-socialistic conceptions of government. Already our national issues have assumed more of this character. European countries have for years had to put forth most strenuous effort in the political struggle to maintain the existing ideas of government and property. We cannot escape the coming issue in the United States. In the past, political leaders have very skilfully made and pushed to the front those issues which, under the circumstances, would best serve their personal ambitions. It is really astonishing how successfully a few men in charge of the respective parties, by adroit management, keep down this issue and put up that, and force a decision upon them in the campaigns. Yet sometimes the stream will break over its barriers. In 1896, for example, the long-repressed socialistic spirit refused to be controlled, and spread itself over the Chicago platform. The particular form in which the issues were presented was not the most significant thing, but the final appearance of the underlying cause itself in national politics. It was not merely the free coinage of silver, or the attacks upon the Supreme Court, which created an epoch-making year in American politics, but it was the first open appearance of a socialistic theory of government, which happened to emerge in the guise of the price question.

Hence it is to be expected that instead of free coinage of silver, or paper-money expansion, new issues will be presented to take their place, which will have

the same general purpose as the old ones. This is why the remark of a prominent political manager in Illinois is perfectly consequent: "I care very little for silver in itself; but I am for the masses against the plutocrats." Therein lies the essence of the whole matter. It is no longer necessary to hold to past party declarations for silver; that issue is not essential to rally the same elements of society around some other platform equally socialistic, but specifically new. Struggles about wages and a larger share of labor in industry are sure to come.

The point of view which was met by the socialistic nature of the price question will be equally satisfied by such rallying cries as anti-monopoly. The crusade against corporations is promising, not only because it jumps with the social philosophy of certain classes, but because the open display of legislative corruption directly traceable to a few arrogant corporations makes the general situation of all corporations assailable. Indeed, the unblushing methods adopted in granting favors to large interests by legislation, both in Congress and in State Legislatures, give occasion for the attacks of the "masses against the plutocrats," and the ruthless corporations have themselves to blame if their acts give occasion for angry reprisals on the part of the less successful portions of society. The system by which manufacturers in certain industries are practically permitted to fix the customs duties on their own products is criminally wrong. It is as bad as allowing

contested cases in court to be decided by only one of the interested parties. In the great case of the producers versus the consumers, the latter are wholly ignored, and the verdict is rendered against them almost without a hearing, and in the terms fixed by the opposing party to the suit. The passage of a great tariff bill is a pitiful display of selfish grab, and the prizes are won by the most unscrupulous, by those with the longest purses. How long can any form of government satisfy the masses who look upon these shameless scenes? Instead of regarding such wrongs as excrescences on a good constitution and capable of cure, it is but natural for them to regard the whole organism as unsound, and therefore not worth preservation. The masses do not discriminate; they strike hard and cruelly at the supposed wrong in the large.

The corporation and large accumulations of capital under one management have a perfectly legitimate place in the industrial and social economy and they have come to stay. They are as certain to remain in the world of industry as electricity among the motive powers; and they will no more be dispensed with because some evils have sprung up in their management, than electricity will be dropped because its new power has not been fully harnessed and lives are sometimes lost thereby. The present expansion of industry and the enlarged employment of labor would be impossible without the corporation. Without it, great docks, gigantic ships, vast bridges, irrigation canals, and the

like, would not be constructed. By means of the corporation small investors are able and willing to put at risk little sums, which, collected from many, make a vast capital, such as is seldom owned by one man, or, if it were, would not be put at hazard in one untried enterprise. Large production, moreover, is a means of economy and gain. Hence, large production in industry and the stock company, or corporation, have mainly, in the present century, grown up together. It is a matter of course that such industrial changes, such new forms of organization, should bring with them new problems and new difficulties as well as new gains. But it is as childish to think of driving corporations out of existence as to abolish steam-engines because they sometimes blow up.

Whatever the special issue, we shall have to cope with socialistic forces in one form or another. This is not necessarily a ground for serious alarm; but we must keep in mind that these questions are less easily met by a democracy than by a monarchy. It is true that in the United States property is more widely diffused than in the older nations of Europe, and the solid good sense and intelligence of the American voter can always be relied upon in an emergency, or whenever a great issue has thoroughly stirred the country. But, on the other hand, it must be remembered, as Sir Henry Maine has pointed out, that democracy is the most difficult form of government. Consequently, our people must be more acute, more wise, more sensible

and more judicial in their settlement of these questions of government, than their brothers under other forms of society. And the press and the magazine have a heavier responsibility with us than elsewhere to guide and enlighten thinking, rather than to debauch it for purposes of political gain.

CHAPTER VIII

A MONETARY SYSTEM FOR SANTO DOMINGO

§ 1. In the summer of 1893 the President of Santo Domingo urged upon friends interested in the finances of that state the necessity of speedy action to aid in escaping the disasters due to the fall in the price of silver. The fluctuations of foreign exchange, and the excessive reductions in the revenues of the state consequent upon the depreciation of the standard, were the matters then most prominently at issue. The action of India in closing its mints and of the United States in repealing the Sherman Act in 1893 no doubt had an influence upon the situation, but mainly through the resulting distress produced by the continuing depreciation of silver. At this time overtures were made to the writer to frame a monetary scheme which would relieve the country from its difficulties; and, of course, the study of the situation demanded a visit to the country and an adaptation of the scheme to existing conditions. It was finally decided that the journey should be made early in the year 1894. This plan was carried out in the months of February and March of that year. The scheme, as finally agreed upon, passed the Dominican Congress, and became a law April 28, 1894. In answer to

several requests it has been thought fit to preserve the law as passed[1] *verbatim*, with the proper explanations, as materials for the study of an important phase of monetary development. There has since arisen an additional reason for placing this Dominican plan on record in that much has been heard of the "gold-exchange standard" proposed for Mexico and China. In effect, the recent proposals deal with essentially the same monetary problem as that in Santo Domingo, and for which this solution was given in 1894, long before the "gold-exchange standard" was brought forward as something modern.

§ 2. The government of Santo Domingo should be clearly distinguished from that of Haiti, which is on the same island. The Country of Toussaint l'Ouverture, the large island next east of Cuba, is separated by the Mona Passage on the east from Porto Rico; it possesses an unequalled soil, and a vegetation and climate of subtropical regions tempered, however, by the surrounding ocean. The western third—roughly speaking—occupied by the Haitians is practically separated by natural geographical boundaries from the Republic of Santo Domingo, which extends over the eastern two-thirds.[2] The "Black Republic" of Haiti stands quite by itself, and no love is lost between it

[1] A brief and popular exposition of the law was given in the *Atlantic Monthly* for July, 1894, from which short extracts may be found in the present chapter. For the text of the law, as translated from the Spanish in the *Official Gazette*, see Appendix I.

[2] 18,045 square miles.

and the Dominican Republic, and, if we except the desultory smuggling over the mountain boundaries, the only ordinary means of communication between the two countries is by sea. It will be clear, therefore, in this matter, that we have no concern whatever with Haiti. Its people and its currency are *sui generis*.

The color-line in Haiti is drawn against the white man; in Santo Domingo it practically does not exist. A population of about 400,000,[1] amalgamated of Spanish, Indian, and negro blood, possesses the characteristics of all. Energy, persistence, and punctuality are, of course, not superabundant; but the people, while naïve and hospitable, are intelligent. Anglo-Saxon habits of trade and commerce would sometimes be shocked. Yet a general and wide-spread respect for pecuniary obligations exists.[2] While it is often inferred from the midday closing of shops that the people are indolent, yet the richest merchant on the island appears in his counting-house at five o'clock in the morning, and will be found there as late as others.

French and Spanish lines of steamships regularly call at Dominican ports; but the principal commerce of the country is carried on with the United States, transported by an American line of steamers, used chiefly for freight. Most articles of daily consump-

[1] The statements in the *Handbook of Santo Domingo* (Bureau of American Republics) are to be taken with much allowance.

[2] I was credibly informed that the *pagarés*, by which the importers pay customs duties and thus secure credit for a few months, have in no instance been defaulted at maturity.

tion are imported, the island not engaging in manufactures to speak of. Of course, coffee, cacao, sugar, tobacco, fruits, vegetables, honey, fowls, goat's meat, charcoal, pigs, and the like are produced at home. On the banks of the Ozama one may, any afternoon, see the natives paddling down in canoes, loaded with these products, in the same manner in which goods have been transported for three or four centuries past. A great valley, the *Cibao*, runs through the Dominican country from Samana Bay at the east, to Monte Christi at the northwest,[1] with fine mountain chains on the north and south, enclosing a splendidly fertile region, or Vega Real, planted with cacao, bananas, plantains, and royal palms in the eastern half. North of the Cibao is a slender strip of land between the mountains and the Atlantic, holding the only northern port, Puerto Plata, at the base of a mountain, 2,700 feet high. A great quantity of goods, heavy and light, are carried mule-back from Puerto Plata over unspeakable roads winding over the mountains to Santiago the principal city of the Cibao of about 16,000 inhabitants. It is no mean achievement to get a piano or a steam-boiler to Santiago. South of the Cibao runs the highest mountain chain, which leaves between it and the Caribbean a very fertile plain, in which are the principal sugar-plantations and the capital, Santo Domingo City, at the mouth of the Ozama River.

[1] From Cape Engaño at the east to the Haitian frontier is about 260 miles. At its greatest breadth the island is 165 miles. The Cibao is about 140 miles long and 14 wide.

East of the Ozama, which is embowered in luxuriant subtropical vegetation, there is, about Macoris, the land best adapted for sugar-growing. Here are to be found great estates,[1] containing many thousands of acres, with the most approved modern machinery, each employing in many cases 500 to 800 laborers. The sugar industry is the animating one of the country. In this region of the south and in the capital are to be found a large laboring population; while in the Cibao the Spanish blood, still more or less intact, makes the aristocracy of the country.

In the Cibao and at the north is found the principal tobacco cultivation, the trade in which centres largely in one house at Puerto Plata. The quality is not equal to that of Cuba, and is mostly sent to Germany to be used for covers.[2] The eastern portion of the Cibao is finely adapted to the growth of cacao and coffee. The cacao-tree bears in five or six years after planting; and full-grown trees have been known to bear as many as 250 mazourkas—the mazourka being the fleshy pod containing the beans—although the average is only about 55. The cacao[3] is marketed

[1] There are said to be twenty-one sugar estates, valued at $11,800,000, spending annually $1,600,000. The exports are reported as follows:

Year	Quintals (of 112 lbs.)
1881	144,604
1889	450,825
1891	324,656

But these figures are not to be wholly relied upon.

[2] In 1891, 68,077 quintals were exported.

[3] Exports in 1891 were 13,218 quintals.

chiefly at Havre or Hamburg, and in these days of increasing chocolate-drinking finds a ready sale.

Some years ago Scotch capitalists built a railway from Sanchez, on Samana Bay, at the east, into the Cibao as far as La Vega, or about 62 miles. And more recently a Dutch company began to build another from Puerto Plata, southward to Santiago over the mountains; but after building 13 miles inland to Bajabonico, the attempt was abandoned. In 1894 the San Domingo Improvement Company, of New York, undertook the completion of this railway from Bajabonico to Santiago, and probably also from Santiago to Mocha. The railways are owned by the government, bonded as they are built to a moderate extent, and operated by the builders under a contract.

Telegraph-lines connect the various cities of the country; and by cable to Curaçao, and thence to La Guayra in Venezuela, or by cable from the Mole St. Nicholas to Santiago de Cuba, they connect with the outside world. Telegraphic communication, therefore, exists with the markets of America and Europe. The Clyde Line of steamers give regular local passenger transportation from port to port, beginning at Monte Christi on the northwest, and touching successively at Puerto Plata, Samana, Sanchez, Macoris, Santo Domingo City, and Azua; repeating the route on the return trip to New York. Inland transportation—except by the Sanchez railway—is accomplished wholly on horseback. No carriage or wagon roads exist. In

some regions, of course, about sugar estates or in the places about Monte Christi, at the mouth of the Yaqui River, in carrying logwood, rough bull-carts are used. To be sure, a badly abraded horseman might find a solitary dog-cart in Santiago to carry him over dubious roads, but the foothills would give him pause.

§ 3. After this conspectus of the general conditions of the country, which gives the background for our experiment, a brief statement may be given of the financial and monetary situation which led up to the new legislation of 1894.

About the time of the American Civil War, the Dominicans, in a last struggle with Spain, completely established their independence.[1] The constant petty warfare with the Haitians also soon came to an end. The republican form of government gave play for a struggle of brains and leadership, in which the strongest man generally won. For several terms the President, in 1894 General Ulisses Heureaux, had been re-elected. Although governing with a firm hand, under his rule telegraphs and railways had been introduced, and incipient revolutions were thereby more easily discovered and more quickly crushed. To-day any stranger can ride the length and breadth of the land in perfect safety.

In 1888 the public finances were said to be in a condition which was far from satisfying the requirements of budgetary science. At that time, the cus-

[1] July 11, 1865.

toms revenues were collected by a Dutch company under a contract with the state. Since that date the revenues seem to have decreased. Early in 1893, the public debt was consolidated, and a new contract[1] made with an American company, known as the San Domingo Improvement Company, of New York, by which the custom-houses were to be transferred to their charge. Under the new régime, inefficiency and possible corruption had been reduced to a minimum, and the revenues had begun to increase. This means, of course, that there was more or less income to spend on railways, interest, redemption of the public debt, and the like.

The duties on imports, being about 40 per cent., were payable in current silver coin. For years the Mexican silver dollars were the only coins in circulation. On July 16, 1890, a law was passed by which a new Dominican coinage was established, under a concession to a French institution, known as the Banco Nacional de Santo Domingo, 15 Place Vendôme, Paris. This concession granted it the right to coin money; and in the performance of this right a coinage law had been passed, creating a monetary system of silver in exact imitation of the French, with denominations of five-franc, one-franc, and half-franc pieces. These coins were exact counterparts of existing French coins, of the same weight and fineness; but they bore

[1] Dated January 28, 1893, and ratified by the Dominican Congress, March 24, 1893.

the devices and ensignia of the Dominican Government. The five-franc piece was expected to circulate on the same terms as the Mexican dollar. In all, 950,000 francs of this coinage were put into circulation. It was soon evident that this plan would not be successful. The strongest legislation was provided to enforce the use of francs as the money of account, but to no avail. No great amount ever entered into circulation; and the *dernier ressort* was again the Mexican dollar. There was no profit to speak of in this franc issue; and the single silver standard, even if its coins carried the country's escutcheon, was no more valuable or stable than silver in any other form. In 1894 these coins seemed to have disappeared from common circulation, although it was possible to get sets of them from the bankers.

The Dominican people had, then, only a single standard of silver. With it, their trade and commerce had suffered so severely that it was the burning question of the day how to remedy the difficulties. The matter had come home to every man on the island. It was the talk of the day. And we may now consider what were the difficulties due to the silver standard under which they were laboring.

The first and most obvious complaint was that the exchanges fluctuated so as to demoralize trade. Exchange in Santo Domingo is generally quoted on New York, the quotation there being in the figures which indicate the number of Mexican silver dollars needed

to buy 100 American gold dollars. If the exchange was quoted at 160, or 185, or 208, it meant that 160, or 185, or 208 Mexican dollars, respectively, were the equivalents at the banks for 100 dollars of American gold. Consequently, Dominican exchange on New York fluctuated to correspond with the changes in the price of Mexican silver dollars in the New York market. Mexican silver dollars, however, outside of Mexico are only coined ingots; that is, they are only forms of silver bullion, of convenient size and of defined weight and fineness. Outside of Mexico they are coins only in name, but in reality bullion. They are bought and sold on the basis of the pure silver contained in them; and, with certain exceptions, the demand for them differs little from the demand for silver bullion, their value being determined in the same way as that of bullion. Some slight exception is to be made to this statement, owing not merely to the fact that the cost of mintage gives the coin a value above the bullion in it, but also to the fact that in this form this particular coin has been by usage preferred in the Orient and in parts of America to other forms of silver. The market value of the Mexican silver dollar, therefore, may vary slightly from its bullion value, because of a greater or less trade demand in other and often distant countries. Too much emphasis, however, should not be put on this point; for, in the main, the value of the dollar corresponds very closely to its bullion value.

The perturbations of trade arising from fluctuations in exchange have always excited undue apprehension, because, being clearly apparent, and observed by all, they make a great impression on the mind. Superficial phenomena though they be, to those who cannot see deeper they appear to be of a fundamental character. It is true, however, that fluctuations in the exchanges produce evils among a population unaccustomed to banking methods for the reason that through banks the evils may be avoided, and ignorance of banks is an ignorance of necessary remedies. An importer into or exporter from Santo Domingo can always buy or sell gold exchange immediately on the completion of the transaction, so as to wholly protect himself.[1] But they have not always used the means at their disposal. And machinery which seems difficult of use may remain unused by a slow-moving people, and the same results may ensue for the time being as if the machinery were non-existent. So even though banks could afford protection against fluctuations of exchange, such a people would still regard the fluctuations as a great evil.

[1] An exporter of goods to Santo Domingo could protect himself by the following method, mentioned by Ellstaetter, *Indiens Silberwährung*, p. 25: "Should a Manchester cotton spinner, for example, accept an order in January, 1892, for cotton yarn to be delivered at Bombay, payable on July 1 in rupees, he would be entirely protected against any influence arising from fluctuations in the rate of exchange, if he should sell a corresponding amount of bar silver for the end of June, 1892, in blanco at the quotation of the day on the London Exchange. If the rate of exchange falls below this, he loses on his goods contract, although he gains by the speculation in the fall of silver; if the rate of exchange rises, then he loses on silver, but he gets a profit on the delivery of the goods."

The situation in this respect was curiously like that in India. Indeed in many of the reports on Indian currency one need only substitute the words "Mexican dollar" for "rupee" to get a clear statement of Dominican conditions. Santo Domingo, to be sure, is only five or six days from the New York market; it has no dominating central government at a distance to which it must remit and which is the creator of bills drawn on the dependent country; and its business and population are far less than that of India. But the monetary conditions are almost exactly the same. Both countries had long had only a single silver standard, and both had been thoroughly excited and disturbed by the same cause—the fall in the value of silver. In India, however, there was a larger body of merchants keenly alive to international movements of trade and exchange than in the Spanish-American republic. Apart from a few leading merchants and planters in Santo Domingo, few would be conversant with the somewhat intricate operations of the exchanges and the consequent effect on prices. The result was that these few merchants dominated trade and prices to a great extent, irrespective of what was going on in the outside world. This, however, could not be permanent. Such domination might, at the best, only delay the inevitable.

In Santo Domingo, however, as in India, the shrewder merchants easily used the little arithmetic needed to convert a sum of silver due them into an equivalent

value in gold in which the foreign payment must be made. Of them it is truly to be said as of the Indian exporters and importers: "In the computation, the cost of insurance against loss by the fluctuations of the exchanges is as exactly worked out as the cost of marine insurance." [1] In Santo Domingo, as in India, what really disturbed trade was the uncertainty produced by the fluctuations. The real difficulty lay not in the exchanges, but in what lay behind the exchanges.

One may apply entirely to Santo Domingo the conclusion of the British Indian Currency Committee[2] on the question of fluctuations of the exchange:

"It is said that legitimate trade is replaced by mere speculation and gambling. . . . It does not appear to be certain, even in the view of those who are most strongly sensible of the mischievous effect of fluctuations of exchange, that the volume of trade over a series of years has been diminished from this cause, though there seems a common agreement that any sudden or violent fluctuation almost paralyzes business for a time. It is to be observed that it is not so much the fall of exchange [in Santo Domingo it would be a rise of exchange] which is complained of, as the fluctuations, whether in one direction or the other. . . . It must be remembered that, before the fall in the price of silver began, and the fluctuations in the rate of exchange depended upon it, the rates of exchange varied

[1] Karl Ellstaetter, *Indiens Silberwährung*, p. 25.

[2] *Report of the Committee Appointed to Inquire into the Indian Currency*, 1893, §§ 25, 26.

very considerably during particular years, though, no doubt, the fluctuations have been much more frequent and considerable since that time.

"Upon the whole, it cannot be doubted that it would be well if commerce were free from the inconveniences of fluctuations which arise from a change in the relation between the standard of value in India and in countries with which her commerce is transacted. It must not be assumed that the adoption of the same standard for the United Kingdom and India would remove all the disquieting causes of the disturbance of trade of which complaint is made. If the commodity which lies behind the exchange transaction is one that continues to fall in relation to gold, the risk which arises from bargains in a falling market will still be present."

§ 4. The producers of coffee, tobacco, sugar, and cacao were in a peculiar position; but they form the class who produce almost the only articles of export. The sugar and cacao planters, too, were then almost all foreigners. The sugar-plantations on the Caribbean were large, equipped with the latest machinery, and managed with great skill. Their sugar was sold almost entirely to the United States, being sent either by the Clyde Line, or by sailing vessels. For the proceeds of their products, therefore, they drew on a gold-using country; and to the extent to which they purchased American supplies they bought in a gold-

using country. In a measure, therefore, they had hitherto escaped the effects of fluctuations in silver. But their hundreds of Dominican laborers were paid in silver, as were also all their dues to the state.[1] Here the silver question affected them seriously; or, rather, with the steady fall in silver they had been steadily getting their labor cheaper in comparison with the metal (gold) in which they sold their product. A change therefore from silver to gold meant for them a readjustment, and a return more or less to former conditions. If they could no longer pay their laborers in Mexican dollars costing them only 50 cents in gold, and if they must provide silver currency at 100 cents in gold, it was a serious matter. On the face of things, it meant to them an increase of 100 per cent. in wages. But a slow and uniform fall in silver did not hurt them. They suffered, as well as others who drew bills, from uncertainty in the rates of exchange. A planter, drawing a bill on New York against a cargo of sugar, could sell that bill in Santo Domingo for the Mexican silver with which to pay his laborers. But if, as happened in the winter of 1893–94, Mexican dollars fell in a period of two months from 56 cents to 48 cents in New York, such a bill would have become of fluctuating value; and on a gold bill of 10,000 dollars, it would have made a difference of about 3,000 Mexican dollars. By waiting two months

[1] They had no property tax, but contributed to the state only by export duties on raw sugar, by port dues, or by *octroi* duties on carts passing through the city.

the bill would have bought 3,000 more Mexican dollars. Obviously, the sugar-planter would in such times hesitate to sell bills for silver; and yet he might need money for his pay-rolls. Hence a falling price of silver tended to make bills on New York scarce and high in Santo Domingo. The reverse would also be true. If silver rose, or if the gold standard were to be introduced, there was nothing to be gained by holding back bills. But, to a certain extent, the planter was in practice always betting whether silver would rise or fall, when drawing bills.

The sugar-planters would be affected in another way by the proposed gold standard. There is an export duty on raw sugar, and several port charges, which fall, of course, on the planter. If the same revenue rates were exacted in gold as were formerly paid in silver, it would amount to doubling the duties. Naturally, they opposed this increase of payments to the government under the cloak of a change to an improved standard of payment. A compromise, however, was effected by reducing somewhat the rate of duty when paid in gold.

What was true of the sugar-planter was, in the main, true of the coffee and cacao producer. The cacao is marketed in Havre, or Hamburg, and the grower can draw at thirty days' sight, and of course in gold. Of these large producers, therefore, as employers of labor it may be said that they gained what their laborers lost by the steady fall in price of silver. They sold

for gold, and paid in silver. There never was a clearer illustration of well-known monetary laws than in this phenomenon. With a falling, or depreciating standard, employers of labor gain and laborers lose; with a rising, or appreciating standard, employers lose and laborers gain. I shall return to this later, after speaking of prices.

§ 5. The second, and most obvious injury arising from the depreciating standard was that suffered by the government. It was practically the same difficulty encountered by India. Customs revenues collected in Mexican dollars diminished exactly as silver fell in value; that is, they fell relatively to their gold-bearing obligations in other countries, and in regard to all purchases in gold-using countries. It was not a question whether gold had or had not appreciated. The revenues were a fluctuating quantity as compared with the articles to be purchased. As sugar-planters gained by a fall in silver, in which they paid their export dues, in comparison with the gold for which their products were sold, the government lost. And in order to make payments, or to meet the interest on public debts held abroad, the revenues constantly became less and less sufficient. As silver fell, the revenues shrank. The only resource was to raise the percentage of import duties, a measure which would naturally be unpopular. All these conditions were particularly severe to a government whether frugal or extravagant.

The adoption of a gold standard would have the effect of increasing the duties, if the old silver rates were retained. It would still be a means of increasing the revenues, even though the rates of duties were lowered in percentages. The government, therefore, would have many reasons for favoring the adoption of a new standard; and for trying to escape from the evils of a depreciating silver standard. The credit of the country, the value of the bonds, the means to build railways, the improvement of harbors and rivers, the increase of military and naval protection, the building of forts, the carrying on of internal improvements—all these were concerned in the question of gold and silver. All the varied interests, moreover, political and financial, which were necessarily connected therewith, must be considered. As a rule, these would find only disadvantage in a fluctuating, or depreciating, standard. In the end, they must all work for reform —if the friction so often present in details could be avoided.

§ 6. To the economist probably the relation of the silver standard to prices must present the most interest. It was so often contended that silver had not fallen as compared with commodities, but that since 1873 both commodities and silver had moved together away from gold; that it was gold which had advanced in value from causes affecting itself, while commodities and silver had remained at the old ratios. It is

not my purpose to argue this point here; but to state the actual facts found in Santo Domingo which bear upon the acceptance of the above theory. If silver prices did not change, or fell, then perhaps the change was in gold; but, if silver prices rose, and gold prices remained unchanged, then it was evidently silver which had fallen, and fallen, too, relatively to goods.

In countries like India and Santo Domingo it is to be noted that general readjustments of prices are made slowly. In Santo Domingo inertia went so far for a time in preventing changes in prices that bankruptcy was quite general. Torpid habits of mind on such questions left large masses of people under the domination of a few aggressive merchants with a talent for leadership. Removed from quick means of communication with the outside world, matters easily went on for a time unchanged by the external conditions. In regard to a staple product, largely controlled by one house, it is said that the same price in silver was steadily paid to producers, irrespective of outside changes in the value of silver, because the exporting house made itself whole in this case in the drawing of bills. Such temporary shifts, however, cannot exist in the face of open competition. In general, the operation going on in Santo Domingo was almost exactly that described by Nasse in regard to India,[1] as follows:

"The immediate consequence of a change in the relative values of the two metals, is a corresponding change

[1] Quoted by Ellstaetter, *Indiens Silberwährung*, p. 32.

in the value of (1) the money circulating in countries having a silver standard relatively to (2) that circulating in countries having a gold standard—which is expressed in the rate of exchange. But if the standard of value of a country depreciates in comparison with that of other lands, only exported and imported articles will first be affected in their relative values by the change. The rising rates of foreign exchange must raise their prices. The relative prices of other goods, however, are not affected for a considerable time by the change in the value of the home, as compared with the foreign, circulating medium. The wages of labor, and a variety of conditions affecting the prices of articles of daily use are only gradually changed."

Under peculiar conditions, domestic prices in Santo Domingo for a time withstood the changes in the value of the standard in the outside world. But this could not continue indefinitely. The power which kept up prices for a time was a belief on the part of leading merchants that the outside change in the value of silver was only a passing phenomenon and that very soon silver would rise again. This was maintained, as has been said, until great distress arose. But finally, when the stress was too great to withstand, even the conservatism peculiar to the Spanish mind gave way, and prices rose with a bound, instead of rising gradually as they would have done in open competitive markets. Then followed a *sauve qui peut*, in which the wealthy looked out for themselves and the ignorant

lost.[1] I happened to arrive at Puerto Plata at the time (February and March, 1894) when this rise of prices was taking place under great excitement. Within the previous twenty days the silver prices of all goods had advanced about thirty per cent.[2] And during my stay on the island they continued to change. It thus appears that silver had changed and very decidedly, not only in regard to gold but in regard to commodities. From this it would be absurd to infer that gold had appreciated.[3]

The same results seem to have appeared in India, according to the information given by the Indian Currency Commission. When Nasse wrote in 1886, there had been no serious change of prices. But from the tables of prices of Mr. O'Conor, articles imported from Great Britain fell in price in India, but not as low as they fell at home; that is, the prices in India were buoyed up by the decline in the purchasing power of the rupee. For example, mule twist, No. 40, fair, 2d

[1] A Chinaman in Puerto Plata, ignorant of the rise of prices decided upon by the larger merchants, found, to his amazement and delight, that his stock of rice and other goods was selling remarkably well; indeed, his sales for the day had exceeded any previous record. Leaving his empty shelves, he went to an importer to replenish his stock. He then discovered that he could not buy new goods for anything like the price at which he had already sold. By this method of induction he learned to hate silver.

[2] This sudden, although delayed, movement in Santo Domingo is clearly contrasted with the constant comparison of silver with gold in Havana, where, in a large commercial city, there is ready and frequent intercourse with the outside world. The streets were studded with offices for exchanging gold into silver, the fluctuations between the two metals actually supporting a large class. In many shops, placards were displayed, giving daily quotations of American gold in Spanish silver.

[3] This, however, has been asserted on the strength of the stability of prices in China. *Cf.* E. Benj. Andrews, *Quarterly Journal of Economics*, June, 1894, p. 323.

quality, had fallen, from March 1, 1873, to January, 1892, 46.67 per cent. as reckoned in gold in London. In India this imported article, reckoned in silver, had fallen only 36 per cent.; as reckoned in gold in Calcutta the price had fallen 54 per cent.[1]

As regards the articles produced and sold in India, expressed in silver, it is clear that they have distinctly risen. Comparing 1861–65 with 1891, rice rose from 103 to 149; wheat from 103 to 135; jawar from 122 to 138; bajra from 120 to 137; ragi fell from 149 to 138; grain rose from 88 to 129; barley from 80 to 131. The Indian Government,[2] on October 5, 1892, said: "In the case of wheat and rice, the only two grains of which the exports bear a material proportion to the local consumption, the wholesale prices will be largely determined by the gold prices in Europe and the rate of exchange for the time being. As regards the retail prices of food grains, it is worthy of notice that there have been loud and persistent complaints, during the last three or four years of the high range of prices of the articles of food which are in common use by the people at large." There is still more evidence which need not here be given to show that the purchasing power of the rupee in India has declined. This may be taken as conclusive, now that the recent tables of prices by Mr. O'Conor have been published.[3]

[1] Cited by Ellstaetter, *Indiens Silberwährung*, p. 36.

[2] *Minutes of Evidence, Indian Currency Commission*, p. 161.

[3] In Atkinson's index numbers for India, there was a rise from 100 in 1886 to 125 in 1893, and to 174 in 1918. See W. C. Mitchell, *Bulletin of Bureau of Labor*, No. 173, p. 282.

In Santo Domingo, the sugar, coffee, tobacco, and cacao—the main exports—like wheat and rice in India, have their prices fixed in the European and American markets to which they are shipped, and do not depend on silver quotations. So long as their cost of production at home was paid for in the same number of Mexican dollars—which was long the case—they could export with increasing facility as silver depreciated. But in regard to commodities in general, in Santo Domingo as in India, the fall in the value of silver resulted in a compensating rise of prices and a diminution in the purchasing power of the Mexican dollar, as well as of the rupee.

§ 7. The laborers were the class who in the end suffered most. Santo Domingo, with its slowness in adapting itself to changed conditions, was precisely the country in which wages would lag behind the movement of prices. As in our Civil War, when the "greenbacks" depreciated and prices rose, wages did not immediately follow. It is the old fact, in a new form —that receivers of wages suffer from a depreciating currency. Wages are slow to rise and quick to fall; and in Santo Domingo there was another illustration of the truth of this familiar proposition.

The laborer was ignorant, unfamiliar with monetary operations, and the recipient of wages customarily fixed at 60 or 75 cents in Mexican coin, and, rarely, at a dollar. In 1888 in Azua wages were 50 cents a

day in Mexican silver; and there is ground for believing that wages have risen since then. But with a fixed rate of wages their purchasing power had diminished as prices rose. The laborers are most numerous on the southern side among the sugar-plantations and in Santo Domingo City. They are not efficient, nor careful, nor steady. But nothing amazed me more than the nearly universal belief of the laborers everywhere that silver was unsteady and undesirable as a means of payment. They had found out by experience that their silver wages were losing in purchasing power. The great democratic feeling of equality may account for this—since what was known to one was passed on to every one else. The laboring classes were a unit in wishing a gold medium of payments.

The reason for this was not far to seek. How was the laborer, now receiving the customary 60 or 75 cents, to be affected by a change to a gold standard? The question evidently was, how much of the new medium would he receive? The gold medium would buy twice as much as the one of silver. It would be difficult to persuade the laborer to take any less number of cents in gold than he formerly received in silver. It is evident that the laborer starts out with the initial advantage in any change to a better standard. The presumption is that he will ask for the same number of cents for his daily wages; and even though 30 or 40 cents in gold might buy as much as the old wages it was hardly likely that the daily stipend could be

reduced from 60 or 75 cents to that low rate. Labor is not easy to obtain; hence working men can demand and secure a very considerable advance in wages. That the general mass of people fully understood this principle cannot be said, but it was very certain that they earnestly favored the gold standard. The very same reasons also were clearly those which underlay the opposition of the sugar-planters and large employers of labor to the proposed reform.

The class who actually suffered heavily, but were in a position to protect themselves, were the merchants, or dealers in imported goods of general consumption. Merchants, for example, importing cotton goods from gold-using countries on credit, were under obligations to pay in gold on settling accounts at the end of the period of credit. In Santo Domingo the importers sell to small dealers who distribute goods directly to consumers. These small dealers sell on credit, often for as long as nine months, and they pay the importers in silver. Clearly, when silver was paid in nine months after purchase of goods, the loss from the lessened value of silver fell upon the merchants who were obliged to settle accounts in gold. Many articles are imported, and as the class of those engaged in distributing goods is very large, compared with producers, the distress was wide-spread; and in the minds of all it was clearly associated with its real cause, the fall of silver. The goods did not change in prices relatively to gold; silver changed relatively to the goods as well as to gold, as every one knew.

§ 8. From the preceding exposition of the conditions existing in Santo Domingo affecting the monetary and financial situation it may be better seen what the legislator had to deal with. There were, of course, many difficulties to be overcome and many pitfalls to avoid. In regard to the fluctuation of exchanges, as was fully explained, there was no vital or insurmountable obstacle to trade; but steadiness in the exchanges would give confidence and ease to business. Changing prices due to a fluctuating standard were a real evil, to be prevented by all possible means. The revenues must be maintained, and laborers protected from rising prices. The forces then to be counted on for reform were: the government and financial interests; the laboring classes; and the traders who distributed to consumers. On the other side would probably be found those dealers in bills who profited by the high rates of exchange due to fluctuations; those affected by higher rates of duties; and the sugar-planters. Thus the government and the great mass of the people were urgent for reform as against a lesser number of bankers and larger producers.

It is evident that a monetary scheme was inevitably bound up with large financial and fiscal questions and with the general business of the country. The new system had to be carefully adapted to existing monetary habits. The Mexican dollar had long been the money of account, and had to be reckoned with. The failure of the recent franc system of coinage to meet

the situation was ominous for any too great departure from monetary habits. In a country in which the greater number of transactions were in small sums, it was necessary that silver should be provided for general use; and yet it was imperative that this silver should be maintained at par with the gold currencies of countries with which they traded. The new scheme, in short, must meet the following demands in order to secure enactment: It must furnish a stable par of exchange; it must not violate the monetary habits of the people; it must provide silver as the money in general use; it must protect the silver money from all fluctuations of the metal; and yet it must, in addition, provide a profit for the government.

To meet these requirements the scheme was drawn up as embodied in the law,[1] which was actually passed, April 28, 1894. The provisions of the law explain themselves; but it may be well to call attention to a few principal features in it.

(1) The monetary unit adopted agreed with the prepossessions of the people. The *peso*, or dollar, being their customary coin, there was a natural desire to obtain, so far as possible, uniformity with the coinage system of the United States, with which the largest trade was carried on. There being the friendliest confidence in the United States, the proposal to adopt coins of the same weight and size as ours met with general approval. This was carried out so far as re-

[1] See Appendix I.

gards the gold coins; and the legal and monetary unit of the Dominican Republic, was declared to be the gold dollar of 23.22 grains pure gold.[1] But only twenty-dollar, ten-dollar, and five-dollar gold pieces were to be coined.

The field of circulation for all denominations below five dollars was left free for the silver coins. A necessity for the existence of a subsidiary circulation of silver was created. This implied not only the wish to keep in use the largest possible amount of silver able to circulate in retail and general transactions among the people, but the certainty of a greater gain to the government. In the vacuum thus created the one-dollar silver piece was to play the principal rôle, yet only as a token coin. For many reasons of local policy it was decided to make the new Dominican silver dollar heavier than any current silver dollar by fixing the amount of pure silver in it at 380 grains. In its silver content[2] it was to be worth more than any of its brother dollars. As regards smaller coins, inasmuch as the silver dollar piece was a token coin, there was no reason for making any distinction between the proportional weights of it and those of the subsidiary coins;[3] so

[1] See *Law*, chap. I, art. 3.

[2]

United States Dollar	371.25	grains
Japanese Yen	374.4	"
Mexican Dollar	377.4	"
Old United States Trade Dollar	378.	"
New Dominican Dollar	380.	"

[3] The United States silver dollar contains 371.25 grains of pure silver; but two halves, or four quarters, contain only 345.6 grains of pure silver. This difference was made in 1853 in order to put subsidiary silver so far beneath the ups and downs of the gold and silver dollars that the changes

that halves, quarters, and dimes were made proportional parts of 380 grains.

(2) First and foremost, however, was the provision to keep the silver currency at par in gold by a system of redemption.[1] It will be noted that 380 grains was chosen as the silver dollar for local reasons, and that 23.22 grains was adopted as the gold dollar for commercial reasons; there was no attempt whatever made to determine first upon what ratio between gold and silver it would be safe to base a coinage. Hamilton tried that method and failed. Under a system of redemption all the silver needed for circulation could be maintained in use, and the difficulties as to the ratio would vanish. This is the characteristic part of the scheme. The past history of paper money was drawn upon for the means to secure the circulation of silver at par with gold. The Dominican silver dollar was heavier than any other; but its market value was then about one-half of the 23.22 grains of gold in the gold dollar. In general, the value of a promise to pay depends upon the keeping of the promise. Convertible paper is always at par. Why not have convertible sil-

which had alternately driven either gold or silver coins out of circulation would not touch the subsidiary coins. The Act of 1853 was, therefore, practically an act to establish a subsidiary silver coinage; and it left the old silver dollar, long out of use, to take care of itself. At the present day the conditions of 1853 are obsolete; there is no reason for their existence. Under a system of redemption it makes no difference, so far as concerns circulation at par, whether the subsidiary coins correspond with the dollar piece or not. The amount of silver in them is then important only as it affects the suppression of counterfeiting.

[1] See *Law*, chap. III, arts. 14–19.

ver? A paper money with an inalienable 50 per cent. collateral would, on liquidation, be worth fifty cents on the dollar; but there is no difference, except in degree, between keeping at par this kind of paper and a kind which has no collateral but the promise. In either case a reserve sufficient to redeem any note on demand serves the purpose. This also fits the case of silver with a market value of only fifty cents on the dollar. It can be kept at par with gold only by insuring its convertibility into gold. It follows from this that the actual number of grains in a dollar was unimportant.

This method of dealing with silver, moreover, has the merit of demanding of a country only that which is within its power. It cannot redeem all the world's silver; but each country does its own part in redeeming all coins bearing its own imprint that can stay in circulation within its limits. And that is all that monetary science asks of any system. Free coinage of silver would here be an absurdity. It would be somewhat like the printing of unlimited paper; it would destroy the convertibility by which its value was maintained. We do not recognize that legislation has any duty whatever "to keep up the value of silver" or of any other commodity; but even from this point of view a country which by redemption maintains all the silver it can use at twice its value is doing more real service to the value of silver than it could by any agreements upon ratios. Consequently, the Domini-

can law restricted the amount of silver in circulation to sums decreed by the government.[1] We have here, then, the two necessary conditions for a stable convertible currency: (1) redemption and (2) limitation of quantity.

The action of India, June 26, 1893, in closing its mints to the free coinage of silver was a necessary measure; but it was only a half step. The aim in India was to maintain its own silver coins—not all silver—at a stable par in gold. It took then the first step toward limiting its quantity. The next step was inevitable—it must eventually adopt a system of redemption of its own rupees. In no other way has a depreciated currency ever been maintained at par. In the Santo Domingo scheme this was frankly recognized; and it is interesting to note that two members of the Indian Currency Committee (*Report*, p. 42), Messrs. T. H. Farrer and R. E. Welby, strongly recommended this measure for India. India in the end had to come to this.

The quantity in circulation, it was hoped, would be determined automatically. On the one hand, by giving to the Dominican government the sole right to coin silver, there existed the inducement to coin as much as possible, because of the very large profit of about 50 per cent. in the seigniorage. But, on the other hand, this means of profit would disappear unless the system of redemption were maintained intact. An excessive

[1] See *Law*, chap. III, art. 13.

issue of silver would come back on the redeeming offices, and no excess beyond the needs of the circulation could stay out. There was thus a sure check on excessive issues of silver; the self-interest of the government was enlisted to maintain redemption, since only by maintaining redemption could any profits be reaped. The supply of coins was provided by direct outlay of the government; but the gain of the government from the seigniorage was such as to stimulate it to put out all that would circulate. The more put in circulation, the more profit from seigniorage to the government; and the government would not be slow to use this opportunity. Every dollar of silver, costing to coin at the then price of silver about fifty cents, was issued by the government at its face value for one hundred cents in gold. This profit of one-half on the whole of its silver coinage, however, was dependent entirely on the maintenance of redemption in gold. If silver coins were not kept at par in gold then their value fell, and the profit on seigniorage *pro tanto* vanished. This explains why it was for the interest of the government to keep the redemption system intact. On every million dollars of silver coins issued it gained a profit of half a million dollars. The only deduction from this gain was the interest on the reserve fund of gold required to be kept on hand for redemption purposes; but this reserve need never be large, unless there was an attempt to issue silver beyond the amounts needed for circulation. In general, beyond the early tests

made solely to establish a common belief in redemption, the probable demands would be somewhat in proportion to the savings of the community; for savings would usually be converted into gold before being buried or hidden. And, of course, if imports for a time much exceeded exports, gold would move outward. But exports usually exceed imports.[1] With an increased production, however, and a consequently greater purchasing power of the country, gold would have an increased tendency to move toward Santo Domingo. Prosperity would support the system. The building of railways and all improvements would work to this same end.

A precautionary measure[2] against possible hostility to the system provided that gold exchange on New York might in an emergency be used in redemption. The occasion might arise when an enemy would present an enormous amount of silver at once at a branch office in order to discredit the system. A resort to gold exchange, however, would be a most infrequent occurrence. It was allowed only because the island was not in immediate connection with the continent and the reservoirs of gold.

[1] The statistics of exports and imports are not very trustworthy, but the figures for 1891 and 1892 are approximately correct:

Year	Exports	Imports
1891	$2,926,039	$2,687,558
1892	3,035,660	2,011,735

[2] *Law*, chap. III, art. 16.

(3) When it is remembered, also, that persistence of monetary habits[1] is very determined, account must be taken of the Mexican dollar. It was, of course, the interest of the government to discredit all foreign silver coins; for to the extent that they circulated they kept out Dominican silver coins and thereby diminished the profit of the government. Working to the same purpose were the well developed associations of loss and injury connected with the Mexican dollar during the fall in the value of silver, and which were widespread. Without relying on this favorable sentiment, however. the plan provided its own means[2] of driving the Mexican dollar out of circulation. By refusing to receive it in any payments except at a rate which made the Mexican dollar worth more for exportation elsewhere, it would result that as the new silver came in, the old would go out.

(4) Gold and silver coins were made an unlimited legal tender; since silver coins were convertible into gold. Existing indebtedness could meanwhile, until the new coinage was prepared, be settled in Mexican dollars at their market value in gold. All debts contracted before the first day of June, 1894, were to be paid in the money in which they were contracted. After that date, while contracts could be made in any money, in default of an express stipulation of course

[1] In the United States, for example, many people still reckon prices in "shillings" and the like denominations, some of which have not existed as coins for over a hundred years.

[2] Chap. III, art. 13.

the national gold or silver coins would be the proper legal tender.

Other considerations entered into the law which were of no importance to the general scheme. There had been, for instance, a concession previously granted to a French company by which the Banco Nacional de Santo Domingo was established in the island; and this institution had been granted the right to coin all national money. When, however, recent conditions demanded a new coinage system, and the present scheme was decided upon, the Banco Nacional was, by virtue of its concession, given the choice of accepting or rejecting the functions created in the law for a Fiscal Agency which should see not only to the coinage but also to the redemption of the money. The provisions[1] regarding the Banco Nacional were introduced merely to provide for carrying out the system in case this institution was unwilling to undertake the task.

(5) It might be asked, finally, how were the means to be found to provide the new coinage? The first burden would fall, of course, on the revenues; but, as must have been seen, the sums taken from the revenues to pay for the coinage would be only in the nature of an advance. Since the new coinage system provided a profit to the government, it could not be in any sense a burden upon the revenues. Not only did the country get relief from what was crushing trade, not only was exchange prevented from fluctuation, not

[1] *Law*, chap. III, arts. 14–19.

only was the credit of the country and the value of its bonds increased, but the government gained a large profit on the seigniorage, while the country was enabled to go on quietly using silver in its retail transactions. The scheme was simple and compact. Its merits, whatever they are, arose from following correct monetary principles.

CHAPTER IX

THE REFUNDING BILL OF 1881[1]

§ 1. The lack of sound financial judgment in Congress has been so unfortunately familiar as scarcely to excite surprise. The method of selling our bonds during the Civil War, the needless passage of the Legal-Tender Act, the fatuous refusal to permit contraction of the currency, and the insane enactments of the Bland silver bill are mortifying chapters in our financial history. And while modern credit and banking is at once a most intricate and sensitive thing, yet in nothing else has Congress more boldly interfered.

In primitive times, goods were exchanged directly for each other. A hungry warrior bartered a coat of mail for fat oxen. Civilization has gone on, and among its many marvels none is less interesting than the system of banking expedients, by which we are returning to a new but skilfully adjusted method of barter. It is a system grown up from the slow experience of centuries and cleverly adapted to the needs of trade—a natural outgrowth of the increased exchange of goods. It is the heart of the industrial body. Without it, business, in anything like its present magnitude, could

[1] House of Representatives Bill, No. 4592, Forty-Sixth Congress, Third Session.

not exist. And on this sensitive mechanism Congress has often laid its rude hand with a strange mixture of confidence and blundering ignorance.

Banks are not merely lenders of capital, but are the agencies through which the titles to goods pass, so that one article can be offset against another. Like division of labor; international trade, and great railways, banks are a means of abridging human labor. While ponderous trains thunder into our Eastern cities from the Western grain-fields, and others, in return, roll westward across the country filled with silks and cottons, the titles to these goods (and the means by which all are exchanged one for the other) are being carried to and fro in the shape of bills and drafts by the banks, the great *railways of credit*. For every transaction, every line of steamers, every network of railways, there is a corresponding credit service, tallying with each exchange of goods—as it were, in the air overhead and unseen, but really running on its quick despatch through the mails, the telegraph, and the telephone, and officered by the bankers of the country. It is as distinct, separate, and legitimate an employment as is that of a common expressman. Modern banking and the business of the country go together, like the two blades of the scissors. Take one away, and you destroy both.

§ 2. While the national banking system was the best the country had enjoyed, it had existed only since 1864.

Before that time the old state banks were regulated by each State according to varying standards of honesty, with the marked exception of the system in New York, established in 1838, and memorable as the model for the regulation of our national banks. By the New York law a bank was not granted the power to issue notes unless a deposit of state or United States bonds with the state comptroller was made, sufficient to secure the ultimate redemption of the notes. This plan of a special reserve for circulation is similar to the basis of the English Act of 1844, and implies a very different policy from that which keeps no special reserve for any one liability more than another. A bank is like a man in debt, who owns bonds, coin, and securities, to exactly the amount of his debts. He has debts (called liabilities), and he has an equal amount of wealth (called resources) with which to pay. The Bank of England before 1844, the old United States Bank, and the larger number of state banks set aside no special fund for the redemption of their note circulation. One might liken the resources of a bank under that which is now the old system to the crew of a ship, all suddenly called upon to take to their guns; without a man at the sails, a change of wind would be disastrous, and the ship would be wrecked. This, in effect, was what nearly happened to the Bank of England in 1825.

The National Bank Act contained the special-reserve plan, and gave absolute security to the note-holder.

No man ever lost one cent by having in his hands a note of an insolvent national bank. But in this system of circulation Congress proposed to introduce very astonishing changes by the refunding bill of February, 1881, the history of which is worth preserving as a valuable means of teaching—on the principle that a sign-board often warns us where not to go. The provision by which a separate fund was set apart is simple. The banks were required to deposit with the United States treasurer in Washington to secure their circulation United States bonds of any kind, and were permitted (there was no compulsion about it) to issue notes to the amount of only 90 per cent. of the par value of these bonds. (Revised Stat., sec. 5171.) The requirement as to the increase or reduction of this deposit formed section 16 of the Act of June, 1864, and section 5160 of the Revised Statutes:

"The deposit of bonds made by each association shall be increased as its capital may be made up or increased, so that every association shall at all times have on deposit with the treasurer registered United States bonds, to the amount of at least one-third of its capital stock actually paid in. And *any association that may desire to reduce its capital*, or to close up its business and dissolve its organization, *may take up its bonds upon returning to the comptroller its circulating notes* in the proportion hereinafter required, or may take up any excess of bonds *beyond one-third of its capital stock*, and upon which no circulating notes have been delivered."

The important words for the present explanation are "*its circulating notes*," meaning the notes of the given national bank. Should a bank see fit, in a time of depression, to reduce its circulation, it would be able, under this section, to do so only by presenting *its own circulating notes*, and receiving therefor its deposit of bonds. In actual practice, however, a bank holds but very few of its own notes, and could get them only at the places of redemption. National bank notes, being equally good with greenbacks, are never, in fact, presented by the public to any amount for redemption at the counter of a bank. Moreover, an institution is required to receive the notes of any other national bank, and has no object in presenting the notes for lawful money except in cases of insolvency or retirement. The outstanding notes of a given bank are in circulation (by virtue of the sound character of all the national bank circulation) not merely in the locality where the bank is known, but in the hands of merchants, banks, and farmers in almost every part of the country. What is important to observe is that the process of drawing in notes by a bank is a very slow one, and a slow one just in proportion as the national bank note is a safe money anywhere in the Union. For the holder, finding it perfectly good and safe, has no object in presenting it in exchange for other kinds of money, even though the bank may have an object in getting it redeemed. A given bank, consequently, could not reduce its circulation and recover

its deposit of bonds except by presenting its own notes, and it could never get possession of such as had left its hands until after long use had so worn or mutilated them that they would be sent in to the redemption agency at Washington. The weak spot, then, of the Act of 1864, appeared in the practical impossibility of reducing circulation at the will of the bank.

This difficulty was removed by the Act of June 20, 1874, which repealed sections 5159 and 5160 of the former act:

"That *any association* organized under this act or any of the acts of which this is an amendment, *desiring to withdraw its circulating notes*, in whole or in part, *may, upon the deposit of lawful money with the treasurer* of the United States, in sums of not less than nine thousand dollars, *take up the bonds* which said association has on deposit with the treasurer for the security of such circulating notes; which bonds shall be assigned to the bank in the manner specified in the nineteenth section of the national-bank act; and the outstanding notes of said association, to an amount equal to the legal-tender notes deposited, shall be redeemed at the treasury of the United States, and destroyed as now provided by law: *Provided*, That the *amount of the bonds* on deposit for circulation *shall not be reduced below fifty thousand dollars.*"

It will be seen at once that by this change a given bank could withdraw the bonds behind its circulation instantly and rapidly by presenting, no longer *its own circulating notes*, but merely *lawful money;* that is,

greenbacks or coin. The importance of the section, of course, is found in the words "*lawful money*"; for this was a kind of money which any bank could command at once, and in large sums. An institution could thus send to Washington lawful money to the amount of its bonds, withdraw the deposited bonds, and leave a complete security to the note-holder in the shape of greenbacks or coin in the treasury at Washington, to await the slow incoming of the notes for redemption. The effect of the change was simply in the direction of greater ease and rapidity in reducing circulation.

This was the position of the banks in regard to their circulation when the abortive refunding bill of 1881 came before Congress. But to understand clearly the results, it will be necessary to give a short explanation of the generally misunderstood amount of profit derived by the banks solely from their note issues. The method of comparing the amount invested in bonds with the same amount loaned directly to the public does not give the full case against the profits on circulation. If the alternative to investing in bonds were the placing of a like sum in bank reserves, that reserve would carry liabilities (resulting from loans) of three or four times its amount, and the profit from not investing in bonds would be that on loans yielding several times as much as the sum put into bonds, leaving no gain at all on circulation, but rather a heavy loss. The comptrollers, however, have used a simple arithmetical method arrived at by answering the ques-

tion: What profit would the banks lose by withdrawing their whole circulation? As the lowest rate of interest paid by the government at that time was 4 per cent., I shall present a computation of Comptroller Knox, based on a deposit of 4 per cent. bonds:

Interest on $100,000 U. S. 4 per cent. bonds		$4,000
Circulation issued on above	$90,000	
Deduct premium on bonds $12,000		
Deduct reserve (5 per cent.)	4,500	
	16,500	
Leaving loanable circulation $73,500, 6 per cent. interest on which is		4,410
Total income on circulation		$8,410
Deduct 1 per cent. tax on circulation	$900	
Deduct cost of redemptions	81	
	981	
Leaving as net receipts		$7,429
$100,000 capital loaned directly at 6 per cent.		6,000
Difference in favor of circulation		$1,429

When it is remembered that the functions of deposit and discount in banking could be carried on without the consent of the treasury, and that the profits on circulation were practically the only reason why a bank remained in the system, or in fact why the national bank currency existed at all, the inducement did not seem very large. But what is more, without any change in the relation of the banks to the treasury, a rise in the market rate of interest (a matter wholly beyond the control of either banks or treasury) would

have the effect of reducing the profits arising from circulation. To illustrate: suppose the rate of interest became 7 instead of 6 per cent., in the above computation; then the $100,000 could be loaned directly for $7,000 without the owners of it going through the ceremony of becoming a bank, or being examined by a government officer. Of course, the $73,500 would likewise be loaned for $5,145; but the final profit from circulation would be only $1,164, instead of $1,429, when the rate of discount was 6 per cent. This will therefore show that an increase in the rate of loans in the money market reduced the profit arising solely from bank circulation.

But, supposing the rate of discount to remain the same, a change in another element may produce a similar effect. If the banks were obliged to deposit bonds bearing 3 per cent. interest, instead of 4 per cent., then the item of $4,000 in the above computation would be changed to $3,000. This would reduce the net receipts to $6,429, and leave only $429 as the profit which would be lost by withdrawing circulation. So that, if it should happen that the interest on the bonds were to be decreased by a refunding bill simultaneously with a rise in the market rate, the profit would wholly disappear between these two millstones. It must be clear, then, that the profit on circulation depended both on the market rate of loans and the rate of interest paid by the government on the bonds required as a deposit to secure circulation.

§ 3. But still, a consideration wholly apart from the mere rate of interest on the bonds deposited would have affected the profit on circulation. Then the banks could deposit, to secure circulation, any United States bonds, of whatever description. This was an important provision when great changes were going on in the form of our bonded indebtedness, either (1) because the bonds were soon to fall due, or (2) because of a change in the market rate of interest. For, in the first place, as the date of payment of a maturing bond draws near, it gradually falls in value to the par which will be paid for it by the government, even though it may be a bond bearing a higher rate of interest than a new one proposed to be substituted for it. The "sixes of 1880" were bonds bearing 6 per cent. interest, but as they fell due in December, 1880, they gradually came to be worth only their par value ($100), while a 4 per cent. bond, but just issued, was worth $112. At the same rate of interest, a bond running for a long term of years is better for an investment than one for a short term. The lumberman, who looks at two trees of *equal diameter* at the base, estimates the total value of each according to the *height* of the tree. Then, again, a bond running for a short term may be worth less than one for a long term, even though the first bears a higher rate of interest. That is, to resume our illustration, one tree, not rising very high, although *larger* at the bottom, may not contain so many feet of lumber as another, with perhaps a *less*

diameter at the bottom, but which stretches much higher up into the air. This briefly explains the effect of its term on the value of a bond.

But, in the second place, the market value of a bond fluctuates with changes in the commercial rate of discount. If a 4 per cent. United States bond should sell at par, it means that 4 per cent. is the highest rate to be obtained in perfectly safe investments; but if the rate paid by such investments should decline, say, to 3 per cent., the bond which regularly returns $4 a year to its holder pays a rate higher than can be got for other equally safe securities, and consequently rises in its value beyond par to such a figure (about $118) that $4 of interest on this last sum is equal merely to the usual 3 per cent. to be got in the money market; that is, the holder of the 4 per cent. bond can sell it so much above par that the buyer can get in the $4 (of annual return) only 3 per cent. on the amount paid for the bond. In short, all bonds, securities, stocks, land, or any transferable investment yielding a regular income rise or fall in their selling price with the customary rate of loans in the community. If a piece of rented land yield to the owner $100 a year on an investment of $1,000, or 10 per cent., and if other persons can now get but 5 per cent., then the owner could sell his land for $2,000; because the same annual return of $100 would give 5 per cent. on $2,000, the usual rate of interest. So that, without any change in its actual income, the land has risen in its capitalized

value, only because of the change in the usual rate of interest. In this way the United States 4 per cent. bonds, which were at first sold at par (or a very slight premium), had risen in value from $100 to $116 or $117. The price of such a bond, therefore, was a measure of the market rate of interest on safe securities. At the time when the refunding bill was before Congress these bonds were worth 112 or 114, realizing to the investor about 3¼ per cent. These brief explanations will perhaps make it clear that United States bonds have been constantly fluctuating in value, either (1) because some bonds are falling due, or (2) because the market rate of loans varies with the state of trade and general causes. It is to be observed, also, that some changes in the value of the bonds were due to the action of the government itself, and to causes entirely outside of the control of the banks.

The banks had been charged with reducing circulation merely in order to speculate on bonds. But if the premium on their deposited bonds rose, it practically amounted to these bonds costing them just that much more; for they had securities in the hands of the government which they could at any moment sell for the increased value. Then it follows that the profit of a bank on its circulation may be diminished by a rise in the value of the deposited bonds. It may be objected, however, that the banks have gained by the rise in value while they held the bonds. True, but they would have profited likewise by investing their

funds in bonds, purely as dealers in securities, without entering the banking system. They do not get that increase simply because they sent in bonds to secure their circulation; hence it cannot be said that the gain, in any sense, is derived wholly from circulation, or because they are national banks. If the circulation were discontinued, that opportunity for profit would not disappear, and so it is no inducement to continue note issues. The privilege which banking capital will always claim is that of holding its funds with such freedom that it can turn them in any direction where the market offers the best return. If Congress were to ask the national banks to lock up their bonds, they would be required to forego a reward enjoyed by other capital, and there would be a positive disadvantage in remaining in the national banking system.

§ 4. A short time before the introduction of the refunding bill, the machinery of the banks with which Congress tampered so rudely consisted of over 2,000 institutions, with a circulation of over $300,000,000, a capital of over $500,000,000, deposits of about $900,000,000, and loans of over $1,000,000,000; but all these banks together had only $56,000,000 of legal-tender notes and the small sum of $18,000,000 of their own circulating notes, among their resources. To the inexperienced, however, these very figures might give some reason for the constant tirades by certain congressmen against the growth of the money power, and

the fear that it was fastening its monopolistic fangs on the heart of the country. Yet when it is recalled that the number of banks, the amount of deposits and loans (except in times of speculation), are the result of and are in direct proportion to the growing wealth and prosperity of the whole business community, an attempt to "crush out" the banks is as if a horse-breeder, on finding that some of his colts are developing great beauty and speed, should take this as an injury and forthwith cut their ham-strings. Now this was precisely the nature, strange as it may seem, of much of the speech-making on the refunding bill; but how the bill itself was a covert thrust at the banks, and how it brought on a panic, may not have been clear to the general reader. A refunding bill was necessary, because several classes of United States bonds, issued in previous years, fell due in 1881, and authority had to be granted by Congress, in a new bill, to the secretary of the treasury, to borrow funds wherewith to redeem them. Considerably more than $400,000,000 of 5 per cent. bonds fell due May 1, and about $200,000,000 of 6 per cent. bonds June 30. Since these 6 per cent. bonds were issued, twenty years before, our credit as a nation had so far improved that a 4 per cent. bond sold, at this time, at a premium of about 112, which implied that an investor in government bonds would be satisfied with 3¼ per cent.

Without recounting details, a bill entitled An Act to Facilitiate the Refunding of the National Debt was

introduced (February, 1881) into the House of Representatives by the Committee on Ways and Means. The first section authorized the issue of $400,000,000 of 3 per cent. bonds, payable in five years, at the pleasure of the government, but which must be paid in ten years; and $300,000,000 of "certificates" (meaning treasury notes), redeemable after one year, but necessarily paid in ten years, and bearing 3 per cent. interest. These last were analogous to English exchequer bills, and were intended to catch that large amount of floating capital which has not yet found a permanent investment. The rate of interest was placed below the (then) market rate, and, instead of compensating for this disadvantage by a long term, the time at which the treasury could begin to redeem was fixed at five years—a condition likely to lower the attractiveness even of a bond bearing a higher rate of interest. The discussion in the House centred almost wholly on these points; and the ignorance developed was considerable, of course, but not surprising. The important part of the bill, however, and that which made the refunding bill famous, was the fifth, or "Carlisle," section; but the discussion did not embrace its probable results when in operation:

"Sec. 5. *From and after the first day of May, eighteen hundred and eighty-one, the three percentum bonds* authorized by the first section of this act *shall be the only bonds receivable as security for national bank circulation,*

or as security for the safe-keeping and prompt payment of the public money deposited with such banks; but when any such bonds deposited for the purposes aforesaid shall be designated for purchase or redemption by the Secretary of the Treasury, the banking association depositing the same shall have the right to substitute other issues of the bonds of the United States in lieu thereof: *Provided*, That no bond upon which interest has ceased shall be accepted or shall be continued on deposit as security for circulation or for the safe-keeping of the public money; and in case bonds so deposited shall not be withdrawn, as provided by law, within thirty days after interest has ceased thereon, the banking association depositing the same shall be subject to the liabilities and proceedings on the part of the comptroller provided for in section fifty-two hundred and thirty-four of the Revised Statutes of the United States: *And provided further*, That *section four of the act of June twentieth, eighteen hundred and seventy-four*, entitled, 'An act fixing the amount of United States notes, providing for a redistribution of the national bank currency, and for other purposes,' *be*, and the same is hereby, *repealed; and sections fifty-one hundred and fifty-nine and fifty-one hundred and sixty of the Revised Statutes of the United States be, and the same are hereby, reënacted.*"

The aim of the first part of the section was to force on the banks the bonds which they would not take willingly. Otherwise, there would have been no reason for the requirement. But the obligation to hold 3 per cent. bonds on deposit in itself would probably not have produced any general desire to withdraw from

the national banking system. It is true that if, while in receipt of only 3 per cent. on their bonds, the banks could loan funds at the commercial rate of 6 per cent., that of itself would reduce the profits arising supposedly from circulation to less than one-half of one per cent. But, on the other hand, lenders of money could not be sure that the average rate on safe investments would not continue to fall somewhat, and make 3 per cent. a fair return. On this chance the banks might have been willing to run the risk of the rate going the other way; that is, of rising instead of falling. Moreover, it does not seem to have been generally known to the public that Comptroller Knox gave his opinion informally to the effect that the reading of the first part of the section would not require 3 per cent. bonds to be substituted in the place of 4 per cent. or 4½ per cent. bonds, already deposited and not redeemable. So that, as the banks, taken collectively, held nearly one-third of their capital on deposit in these two classes of bonds, this proviso would create a market at the most, for only about $60,000,000 of the new bonds.

By fixing the rate of interest below the market rate, and, in addition, handicapping these bonds by the short term, thereby creating a situation which made it extremely doubtful whether the new loan would be taken up, and expressing beforehand the lack of confidence of the government in the success of the loan by trying to force the banks to subscribe, Congress tried to lock up the capital of the banks invested in these

deposited bonds by making it impossible to withdraw them. The machinery for this purpose was contained in the last proviso of the fifth section, by which the fourth section of the Act of 1874 was to be repealed, and the sections 5159 and 5160 of the Act of 1864 were to be re-enacted. These last were the provisions, previously explained, treating of the means of reducing circulation. If this fifth section had remained in the bill, it would *at once*, on its passage, have taken away the power of withdrawing deposited bonds by sending to Washington *lawful money* (as permitted by the Act of 1874), and would have restored the old process (see sections 5159, 5160), by which the bonds could be withdrawn only after the considerable time necessary for the banks to present their own *circulating notes*. Property belonging to citizens, and deposited at Washington with the understanding that it could be withdrawn at any time, was to be suddenly seized (on the passage of the bill), and held for years; and this retention would prevent the banks from changing the nature of their investments, a power wholly indispensable to the proper carrying on of the banking business. All men are guilty of a little weakness, to be sure, in disliking to see others seize their goods, and bankers are but men in charge of their own and depositors' money! The reason why there was not greater indignation expressed by the general public was probably due to the fact that not one man in a hundred understood what was going on, while bankers did, and refused to be robbed. If

the 3 per cent. bond changed in value by the operation of natural causes, the banks would not have had the power of withdrawing from their (voluntary?) connection with the government; all they could do would have been to practise the noble virtue of fortitude.[1]

History must record with mortification that the bill was passed in this shape by the House, and sent to the Senate, where it was generally believed by the country that it would be changed in the interests of sound finance; that the rate of interest on the bonds would be raised to 3½ per cent., and the extraordinary fifth section struck out as disgraceful. It seems as if there was a spice of irony in entitling the bill An Act to *Facilitate* the Refunding of the National Debt. The finance committee of the Senate (of which Mr. Bayard was chairman) reported the bill to that body, with the expected changes. Secretary Sherman had appeared before the committee and given his reasons why he thought a 3 per cent. bond would not be successful. Estimating the market rate of interest at 3¼ per cent., on the basis of the price of 4 per cent. bonds, he pre-

[1] It is to be observed, also, that the re-enactment of sections 5159, 5160 would have restored the requirement that one-third of the capital should be kept in bonds at Washington (whether notes were issued or not), and repealed the Act of 1784, by which a fixed amount of not less than $50,000 (no matter what the capital) should be kept by each bank. A large bank (like the Chemical Bank of New York), which had previously cared nothing for circulation, and withdrawn all its bonds down to $50,000, would have had to add a very large sum in bonds in order to raise the amount to one-third of its capital, and so be forced to take circulation, whether willing or not.

sented tables to show what the value of 3 per cent. and 3½ per cent. bonds, respectively, would be at certain terms in the future.

Years to run to payment	Corresponding price of 3 per cent. bonds	Corresponding price of 3½ per cent. bonds
1	99.76	100.24
2	99.50	100.48
3	99.30	100.71
4	99.10	100.93
5	98.90	101.15
6	98.60	101.35
7	98.50	101.55
8	98.30	101.75
9	98.10	101.90
10	97.90	102.10
15	97.05	102.90
20	96.30	103.70
30	95.20	104.80
50	93.80	106.20
Perpetuity	92.30	107.70

The second column shows to the eye that an arrangement which ties up a man's funds, so that he loses something each year, is worse just in proportion to the number of years he is required to lose; while the third column, on the other hand, shows that if the market rate is 3¼ per cent., a 3½ per cent. bond is worth a slight premium at the start, and, as it returns each year more than the ordinary rate, it is worth more the longer it continues to pay this higher rate.

§ 5. Despite these lessons in finance, the Senate, on the 18th of February, 1881, rejected the amendments of the finance committee, and passed the bill as

it came from the House with slight alteration. Besides one or two minor matters, the term was changed from five-to-ten years to five-to-twenty years; but what is painful to recall is that the fifth, or "Carlisle," section was retained in the bill by a vote of thirty-two to twenty-nine. The few amendments, however, required the bill to go back to the House for their concurrence before it could be sent to President Hayes for his signature and finally become a law. This parliamentary delay gave the banks time to awake from their sense of security, caused by the general feeling that the Senate, at least, would be honest. In the House, the element which fifteen years before was inflationist, four years before rabid silver men (led by Ewing, Weaver, Bland, and De la Matyr), was anxious to push the bill, and "stab the money power"—as if the "money power" did not include the savings of the industrial classes, even including poor washerwomen and sewing-girls, who were thus represented as constituting a "menace to our liberties." Finally, the whole country was stirred, and protests against the fifth section began to pour in at Washington; and inasmuch as it required a two-thirds vote to take up the bill from the speaker's desk in preference to other business, then fast accumulating at the end of the session, it seemed for a short time as if it would be difficult to push the bill through the House. But after several days of manœuvring the friends of the measure gained their point.

Now, however, since the banks, under the existing

law, had the power to withdraw their bonds at any moment by the deposit of legal-tender notes, rather than be caught in a trap by the refunding bill, they found themselves obliged to alter the whole character of their present business—a very serious step, but one to which they were inevitably driven. As honest men, the officers of the banks had no choice but to act so as to prevent the virtual confiscation of a part of the property of their shareholders. The law could not compel them to issue circulation any more than it could force farmers to plant thistle seed in their wheat-fields. In short, Congress, either not knowing what it was about, or being maliciously disposed, really forced a sudden contraction of the currency, even against the will of the banks. The result was a panic.

Men who want capital go to a bank, just as a man who wants corn goes to a grain store. It is hardly necessary, also, to point out that modern business is largely done upon credit. A firm with a capital of $10,000 does a legitimate business of ten times that amount. Men buy, agreeing to pay at a fixed time in the future; and they sell goods, to be paid for in the same way. So that, although a man is perfectly solvent, his receipts may be so affected, temporarily, that he may need a loan for ten, thirty, or sixty days, until his own collections are made. If the banks, in such cases, are suddenly unable to loan, it is as if the human heart should cease to warm and support the members of the body. That which for the moment

affects the ability of the banks to loan is the ratio of their reserve to their liabilities; or, in other words, the amount they keep on hand with which to meet any demands compared with the amount of those possible demands. By law the national banks were required to hold their reserves in "lawful money." Therefore, anything which acted to subtract from the market the very kind of currency kept as reserve vitally affected the power of the banks to loan; while the only means the banks had of extricating their bonds from the grip of the government, in the few days before the refunding bill could become a law, was by sending lawful money to Washington, to be locked up in the vaults of the treasury until the bank-notes should become mutilated and sent in for redemption, or be purchased at a premium. Between February 19 and March 4, one hundred and forty banks had sent in to the treasury $18,819,585. The disappearance of this amount of money caused a violent paroxysm in commercial circles. Where a dam is thrown across a stream, the backwater forms a wide reservoir, from which a small constant supply of water is led off through a mill-race to turn the wheel of the mill. So the banks form the reservoir of capital (drawn from all classes in the country), from which the smaller stream needed for daily loans is drawn off to "turn the wheels of industry." The sudden withdrawal of lawful money to reduce circulation was of course like shutting off the water from the mill, and

the wheels of industry were suddenly stopped. The usual indications of a commercial panic instantly appeared. No one had money to loan; "industrial strangulation" was going on; and had the stringency increased, the business of the country would have come to a standstill in a few days. Money was borrowed at the rate of about 400 or 500 per cent. per annum. And what is important to note is that the distress which the hostile or ignorant element in Congress believed they were inflicting on the banks really passed on to the people in general, who were powerless to help themselves. In view of all this, it seems almost incredible that a senator of the United States should rise in his place and soberly propose the following resolution:

"That the hostile attitude assumed by the national banks to the refunding of the national debt at a lower rate of interest, and their recent attempt to dictate the legislation of Congress, are contrary to the best interests of the people, and calculated to excite their alarm for the future."

It is as if a burglar should declare it was against the best interests of the community that prudent people should lock their doors and windows in order to keep him out of their jewel-boxes. It is not an exaggeration to say that the "Carlisle section" was a piece of impudent bad faith, of that kind which has always had the greatest effect to lower our credit. A nation

gains, even in money, by being scrupulously honest and fastidious in dealing with its creditors.

I scarcely need say that, although the refunding bill passed both Houses of Congress, it was promptly vetoed by President Hayes, and failed to become a law. The danger to the banks ceased at once, and business again went quietly on. We make these things possible in this country by allowing the untrained congressional bull such extravagant smashings in the financial china shop. But there is little hope of the idea entering his shaggy head that some things are of too delicate mechanism to be brushed by a swing of his tail. A large number of the charters of the banks were to expire in 1884, and a better attitude was necessary to maintain a good banking system. In view of the almost constant struggle between ignorant legislation and our business prosperity, it was well that we give very careful study to the development of war banking methods now and in the future.

CHAPTER X

GOVERNMENT *VS.* BANK ISSUES

§ 1. While the problem of the standard in the United States has been largely settled, other monetary questions of great importance still confront us. Certain forms of our media of exchange, ultimately redeemable in the standard coin, may be issued either by the government or by the national banks chartered by the government. Viewed in the light of wisdom and experience, should these notes be emitted by the general government or by the banks? In spite of the passage of the Federal Reserve Act it still remains a pivotal monetary question. It is certainly a momentous one deserving impartial examination. We may then weigh the arguments (1) for and (2) against government issues and those (3) against and (4) for bank issues.

Leaving out of account inconvertible paper, it has been claimed that the issue of convertible paper by the general government would be a saving to the people. It is assumed that in issuing paper money a profit exists which should be reaped by the State. Obviously, every country must invest a certain part of its wealth in its machinery of exchange; and it is

economy to keep this investment as small as possible consistent with the highest efficiency. Convertible paper is resorted to, not because of a scarcity of gold, but because it saves the expense of using gold; since the reserves for preserving convertibility need not be more than 40 or 50 per cent. The interest on the difference between the total amount of paper and the reserves, therefore, represents the saving in question. This difference can be set free to be used in industry, and the earnings on it constitute the country's saving in issuing paper in place of gold. The saving, of course, is only the interest on, not the whole of, the difference.

The validity of this theory can be tested by our actual experience with the greenbacks, which were inconvertible from 1862 to 1878, and convertible from 1879 to the present time. Assuming a reserve of $150,000,000 in gold to be necessary for the redemption of our $346,681,016 of greenbacks, we may say, in round numbers, that $200,000,000 is the amount of the uncovered issues, on which the interest at 3 per cent. (at which any gold bond in time of peace could be easily floated) would be $6,000,000. This last sum represents the annual gross gain to the people if, on other grounds, it should be regarded as best to supplant a gold currency by a convertible paper issued by the government.[1]

[1] In reality, the gain from using the convertible paper is not a positive gain, but only the reduction of a loss. Suppose all the wealth of the country to be earning 3 per cent. Take out of this total the sum of $350,000,000,

Immediately, however, the question is raised: Does it cost anything to maintain the reserve? Of course, the political or financial management of the state, whether good or bad, will directly influence the ability of the state to keep its reserves intact. Any policy which excites distrust as to the willingness or ability of the treasury to redeem its paper in gold will create activity in the presentation of its notes for coin. Only on the assumption that the government will always be wise and capable will the reserves always remain intact. If not, the reserves will be drawn down, and new loans must be made in order to supply additional gold for the reserves. But our monetary policy has not always been wise: it has often been cranky, foolish, and most ill-judged. Our national vagaries with silver were known the world over. Hence, it was inevitable that the people should have had to pay the price. In truth, so often and great was the fear that we could not maintain gold payments that several times the gold reserves were almost exhausted. Our foolishness reduced to figures means that, to maintain a reserve for $346,681,016 greenbacks, we have had to increase the public debt by $357,815,400, on which the additional

which is used in the form of a gold currency, and while so used yields no concrete returns. The total loss, or price, which the country pays for a currency consisting entirely of gold is the 3 per cent. on this $350,000,000, or $10,500,000. But, if this $350,000,000 is partly economized by using $200,000,000 of convertible paper, $200,000,000 is released to go back to productive industry; hence the loss to the community is reduced to 3 per cent. on $150,000,000, or only $4,500,000. The so-called gain of $6,000,000 annually, which is the 3 per cent. on the $200,000,000 released, is not a positive gain; it is only a reduction of the total loss.

interest charges to the taxpayer are $15,632,616.[1] Thus, as against the reduction of loss by $6,000,000, the issues of the government have entailed an enormous annual expense of $15,632,616. It does not do to base expectations solely on theory. Indeed, it is a serious question whether our governing class is sufficiently intelligent in managing monetary matters to allow our nation to issue paper money except at a fearful cost to the people.

But the above statement of the cost is not all. The iniquitous act of March 31, 1878, required that the notes redeemed by such a vast increase of debt should be reissued. This is the act which created the "endless chain" and the constant drain on the treasury in time of danger. Consequently we have the silly result of having actually redeemed more than $407,000,000 of greenbacks, by an increase of debt ($357,815,400) greater than the total original issues of the greenbacks —and yet we have the whole amount still outstanding! It sounds childish, but it is literally true. In fact, if we had borrowed the $346,681,016 by issuing 4 per

[1]	Amount of Debt Created	Rate of Interest %	Interest Charge
1877–78	$65,000,000	4½	$2,920,000
	30,500,000	4	1,220,000
February 1, 1894	50,000,000	5	2,500,000
November 13, 1894	50,000,000	5	2,500,000
February 8, 1895	62,315,400	4	2,492,616
February 15, 1896	100,000,000	4	4,000,000
Total	$357,815,400		$15,632,616

cent. bonds, at the time of resumption, the annual interest charge would have been only $13,876,240, or an annual saving of $1,765,376 on the interest of the debt actually incurred in keeping up the reserves. If the rate of interest on the bonds had been 3 per cent., the saving would have been still greater. On the face of experience, at least in the United States, it can scarcely be urged that there is any gain to the people in issuing government notes.

Still many persons think that government notes are "a loan without interest," and hence a saving to the state. So well-known a politician as Secretary Sherman thought so;[1] but the facts already given remove the whole basis for this opinion. It never has been shown that the treasury was unable to borrow at some rate at the time (1862) when the first greenbacks were issued, or at any time since. Moreover, if the state had to borrow, it did not follow, therefore, that it must borrow by issuing notes; it was egregious

[1] "United States notes are now, in form, security, and convenience, the best circulating medium known. The objection is made that they are issued by the government, and that it is not the business of the government to furnish paper money, but only to coin money. The answer is that the government had to borrow money, and is still in debt. The United States note, to the extent that it is willingly taken by the people, and can, beyond question, be maintained at par in coin, is the least burdensome form of debt. The loss of interest in maintaining the resumption fund, and the cost of printing and engraving the present amount of United States notes, are less than one-half the interest on an equal sum of 4 per cent. bonds. The public thus saves over $7,000,000 of annual interest, and secures a safe and convenient medium of exchange, and thus the assurance that a sufficient reserve in coin will be retained in the treasury beyond the temptation of diminution, such as always attends reserves held by banks."—*Report of Secretary of Treasury*, 1880, p. xv.

folly to borrow in the form of paper money, which was certain to disturb the standard of value, change contracts, cause an upheaval of prices, and create riotous speculation. Indeed, a loan put out in the form of demand notes is highly objectionable as compared with a loan in the form of bonds issued for a term of years. The demand obligations may be, and generally are, presented for payment in times of distrust and danger, just when their redemption by the treasury is most difficult, and when their conversion adds to the severity of a crisis. On the other hand, a loan on time in the form of bonds gives no trouble beyond the payment of interest, and is not turning up at critical emergencies to be redeemed. Even if the cost to the people of both methods were the same, the latter method of borrowing should be recommended on every ground of theory and experience. Indeed, the confusion of mind between the fiscal and the monetary functions of the treasury is highly dangerous; the two should be kept widely separated.

§ 2. Without doubt, the least recognized, and yet the most far-reaching, consideration involved in discussing government issues is, as already noted, the failure to separate the monetary from the fiscal functions of the treasury. Almost all our monetary ills from 1862 to 1900 can be traced to it. The crude idea that, when funds were urgently needed, they could be obtained by issuing demand obligations bearing no

interest, which could be circulated as money, has long been prevalent, and has produced endless trouble. Ignorant of the principles regulating the monetary system of a country, the treasury might, solely from a need of income which has no relation whatever to the demands of trade for a medium of exchange, inject additional sums of money into the circulation, and upset the whole delicate machinery of exchanging goods. Foolishly to unsettle the monetary standard and the confidence of the public by trying to borrow in a form certain to interfere with the nation's currency is only a way of crippling the power to borrow in general. Thus, two evils result from this fateful confusion of mind: (1) changing the supply of money without any adjustment to the needs of trade is a blow at the very vitals of exchange, prices, contracts, and business security; and (2) the credit of the treasury being dependent on its management and resources, the issue of paper money is a blow at credit, because it is an open confession of inability to borrow in the market on normal conditions. Because the government, in 1862, when borrowing had not yet been fully tried, issued inconvertible notes, without providing any reserves whatever, it could not escape the charge of having descended to the last resort of a bankrupt treasury; and this unwise action enormously injured the credit of the United States and increased the rate at which it was subsequently forced to borrow. There is only one way to borrow: that is, to pay the price fixed by the

credit of the borrower in the open market. From this there is no appeal. Indeed, the depreciated paper caused to the Union a loss of at least $500,000,000 in the creation of additional debt due to higher prices, speculation, and the diminished amount received for bonds due to a damaged credit. In no way can the facts of our experience support borrowing by issuing forms of money.

§ 3. *C'est le premier pas qui coûte.* Once a false step has been taken, it is apt to lead to serious consequences. The very existence of paper issues, originating in a wrong method of borrowing, is a constant menace. The mere lapse of time in which no injury has been incurred unfortunately serves to lull the fear of danger. If retained, such issues are a suggestion for similar crude expansions in the future, when men are too excited to judge calmly of their acts. Their very presence is an incentive. If legislators were all monetary experts, and never influenced by political considerations, there would be little risk in retaining for a time our greenbacks; but we must take men as they are, and provide for the probable acts of those who are incompetent and ill-advised. Obviously, these national guardians of our monetary system do not personally lose anything when they get the treasury into desperate straits; they have no weight of responsibility due to any personal relation to the issues—thus being quite differently affected from the bankers

in their relation to bank issues. Humiliating as it may seem, the maintenance of the convertibility of greenbacks into gold has again and again been imperilled. The whim of the executive, or the sudden use of an unreasoning campaign cry, may make it impossible to keep the slight gold reserves which protect our standard of value and prices. Until recently redemption in gold as against silver was largely a matter of the personal choice of the executive. All in all, the very presence of government issues is too much of a danger to be kept forever hanging over a great commercial nation.

What is still more dangerous is the fact that the whim of the government is the only limit to its issues. Ordinarily, sane business men would concede that the quantity of the media of exchange should bear some direct relation to the amount of exchanging to be done. In the case of government issues, the quantity as well as the quality depend on a vote of Congress. If a fancied need presses upon men inexperienced in monetary operations, especially if they have been inoculated with the fallacy that the more money a country has the better off it is, there will be excessive issues, followed by raids on the reserves. The paper will depreciate—and the country will undergo rapid fluctuations in prices, an unsettling of contracts, a period of mad speculation, leading to the inevitable ruin of a commercial crisis. These are not matters of imagination; they are only mild descriptions of what the

country actually suffered from 1862 to 1879 because of government issues. The crisis of 1873 was directly traceable to the speculation inherent in the fluctuating greenback standard which followed the Civil War.

Naturally enough, false doctrines expressed in government action may poison the whole course of public opinion for generations to come. There was the belief that a government stamp created value. If so, why did its solemn promises to pay, although made a full legal tender, depreciate to thirty-five cents on the dollar? Then also came the fallacy that the more money the more wealth; as if wealth came into existence by increasing the counters for wealth. Again, because paper was depreciating and prices were soaring, the conviction grew that prosperity came with increasing the quantity of paper money. The fact was, the prices rose to keep up with the depreciation of the standard. And, far and wide has the belief spread to-day—aided by our experiences with the depreciated greenback—that prices depend upon the quantity of money in circulation. Thus the ground was prepared for the silver agitation; on the theory that gold was insufficient in quantity. This whole brood of heresies is traceable to the crude conceptions which led Congress to attempt to borrow by issuing inconvertible paper in 1862.

§ 4. If judgment be given against government issues on the grounds thus presented, we are next forced to

weigh the claims for and against the only other alternative instrument to be used as paper money—bank-notes.

There has come down to us from the State banking orgies before the Civil War, as well as from the period of depreciated greenbacks, a belief that the right to issue money gives to the issuers the power to control the money market; to put prices of goods and securities up and down; and even to bring on panics. The "money octopus" is supposed to work through the power to manipulate the issues of banks, and to wish to confine the sole right of issue to the banks. The problem we are here discussing has nothing to do with inconvertible paper of changing value. The real issue is between government issues and bank issues—each convertible into gold. Issues of either kind of money, if kept redeemable in gold, would have no greater effect on prices than gold itself would have.

The only way in which the "money power" can control prices and securities is by obtaining control over capital and purchasing power, and thus influencing the demand. This purchasing power obviously can be had by loans from banks. The pith of the matter, then, lies in the ability to get loans. Now, suppose the "high financiers" have got the loans, where do the bank issues come in? Nowhere. When a loan is given, the borrower's deposit account is credited with the amount. Then payments are made, especially in all large transactions, by checks on these deposit

accounts. No bank-notes to speak of are used. It would be an inconvenience to the borrowers to be forced to take the bank's notes; and as the profit to the bank arose from the discount on the loan, that profit would be realized just the same whether the bank gave a deposit and checking account or whether it gave its own notes. The National City Bank of New York, the largest bank in this country, had (in 1909) loans of $135,405,002, but it issued only $9,217,497 of notes. All the largest city banks have made their profits and accumulated huge surpluses by use of checks on deposits, and with very little use of their note issues. The same is clearly seen in the accounts of the banking department of the Bank of England. Quite apart from the issue department, it does the main banking work of the greatest financial centre in the world by the use of checks drawn on deposits.

There may be many persons—of the Upton Sinclair type—who really think that banks may wish to bring on panics. A bank is *ex natura* so placed that to bring on a panic would bring on its own destruction. Every one knows that in the liabilities of a bank account appear the items indicating its obligation to shareholders for the capital, surplus, and profits, as well as the items of deposits indicating its obligations to depositors for the sums left with the bank which may be drawn on demand. On the other hand, the bank lends its resources—whether coming from capital or deposits—and receives as its only security promises to

pay (supported by assets) from whose recurring maturity its loans are repaid. If these assets, such as collateral composed of stocks and bonds, or paper based on the sale of goods, should lose their basis of value, the banks would lose. They have already given the borrower the right to draw, and they get repayment by the borrower only in the future. Hence, the only chance of the bank to regain what they have parted with lies in the possibility that the assets will retain value enough to cover the loans already made. To suppose, therefore, that the banks should ever have a motive for bringing on a panic would be like supposing that a sailor afloat on the ocean in an open boat would have a motive for punching a hole in the bottom of the boat—the only thing which saves him from destruction.

The popular supposition that the bankers gain a special profit by the issue of notes, which by right should go to the government, is doubtless wide-spread. In truth, there is *per se* no banking profit except that arising from the discount on loans; and since discounting, or lending, can go on without issuing notes —as is seen at all banks and trust companies organized under State laws—then it is patent that the profit of banking is not due to the issue of notes.[1]

[1] For the sake of brevity and clearness, I omit the claim that a national bank depositing bonds to secure its notes gets a profit both on the bonds and on the notes when issued. In reality, other things being equal, a bank which stays out of the national system can make more profit than one in it. If each have the same reserve of $100,000, it would support $400,000 of loans on a 25 per cent. reserve; and the profit would be, say, 6 per cent.

Yet, even if it were desirable to have the banks issue the paper money, it has been claimed that the banks would be unable to issue enough money for the enormous trade of so great a commercial country as this; and consequently, the government is the only authority competent to meet so great a task. Those who think thus overlook the patent fact that (omitting gold) the note issues, either of a government or a bank, are not much used in actual transactions of any importance. In fact, payments are usually made by checks. Therefore, the monetary service to be performed is not that coterminous with our trade, but a service coterminous with the need of reserves and of those retail and minor transactions in which buying and selling are closed only by the passage of some form of coin or paper money. We may need cash for buying a railway ticket, but not for buying a cargo of wheat. It is the banks which supply a deposit currency, offsetting checks at clearing-houses, by which in the United States over $250,000,000,000 of goods per year are exchanged, and without recourse to silver, gold, bank-notes, or greenbacks, except for settling small balances.

on $400,000 in case, as of a State bank, no notes were issued. But if the bank went into the national system, and if its borrowers called for notes when a loan was made, then the whole reserve must go for bonds which at best would support only $100,000 of notes. Thus its loans would be limited to $100,000, and its gains would be restricted to 6 per cent. on that sum, with a small interest on the bonds. If it had sufficient discount business, the bank could earn much more outside than in the national system, and wholly without the issue of a single note. *Cf. supra*, chap. IX, § 4.

A more interesting point is the suggestion that bank-notes are unconstitutional. Obviously this point has no reference to banks chartered by the national government. That issue was settled long ago, in 1819.[1] If the claim has any relevancy, it has it only in regard to notes issued by banks chartered by the several States. The Constitution forbids States to emit bills of credit, but it does not forbid a State to incorporate banking institutions. In constant practice, from the beginning, State banks have been allowed to issue notes. Webster urged that the power of the general government to regulate coinage included the right to supervise all State bank issues; and the right of Congress to regulate the issue of State banks, or tax them out of existence, has also been settled.[2] Therefore, all there is in this objection applies only to notes of State banks, and in no way affects the right of national banks to issue notes under an act of Congress.

In favor of government issues is the obvious claim that they would be uniform throughout the different States of the Union, and prevent the condition of variety and depreciation which existed in the State currencies before the Civil War. But this admitted advantage in favor of government notes is no argument against bank-notes, if the latter, as in the case of the national bank notes, can also be made safe, redeemable, and uniform throughout the whole country.

[1] Veazie Bank *vs.* Fenno, 8 Wallace, 533.
[2] McCullock *vs.* Maryland; 4 Wheaton, 316.

§ 5. When we come to positive arguments in favor of assigning to banks the duty of issuing the notes needed by the trade of our country, we are obliged to ask: What other institutions than banks exist which can know when and for how much a demand exists for notes in transactions which cannot be performed by checks? Certainly, Congress cannot know. Whether we like banks or not, the fact is that they are the institutions of credit, evolved by centuries of experience to serve the needs of trade; and whether they like it or not, the banks must satisfy these needs, or cease to exist. Through them idle and new funds pass into the hands of producers; they disburse capital; and they alone can know in just what way the public wish the capital transferred to it—whether through the medium of gold, silver, paper money, or checks. In this respect the bank is the slave of the business public. If the public wish only a deposit account, the banks provide it; if they wish notes, the bank must give notes.

If such be the case, the banks are the only organizations which can provide an elastic currency. We have seen that the treasury cannot do it. As a matter of fact, the greenbacks have been rigidly limited since 1878. Although a circulation of bank-notes secured by bonds can never be anything but inelastic, since the amount of notes is made to depend upon the price of bonds and the rate of interest, the banks can be given a safe method of issues, quickly redeemable, such as

would provide the necessary seasonal elasticity not possible with government issues—elasticity, of course, which contracts as well as expands. Leaving the elasticity to the banks is the only democratic way. There could be no overissues under a system which provides for immediate redemption of bank-notes at many centres; and they would go out only when there was a need, such for instance as arises in the autumn harvests.

Far different, however, from this seasonal elasticity is the demand for elasticity in a time of crisis. In such a crisis as that of 1907, when an antecedent expansion of speculation, undue rise of prices, and reckless promotions, had paved the way for disaster, an elastic currency, although it could not have prevented the panic, would yet have in some measure modified the severity of the crisis. In times of emergency such as this, instant response to the need, and at the spot where the need exists, whether for loans or for notes, could have been made only by banks to their borrowers. Treasury expansion, publicly advertised, would have been a certain means of frightening depositors and borrowers, and would only have aggravated the disaster.

§ 6. It being understood that convertibility into gold is the prime requisite either of government or bank issues, it is appropriate to note that the cost of maintaining coin reserves, which we found to be so heavy in the case of the greenbacks, would be removed

from the people and put wholly upon the banks, were the latter to be required to furnish all the notes. In truth, the banks would never have any real difficulty in maintaining gold payments, provided the government maintained the gold standard and redeemed its own obligations in gold. The national bank note has from the beginning always been as good as the government note into which it was convertible; and the most significant thing in this result is that the national bank notes have not been and are not now a full legal tender. Clearly enough, more depends on redeemability than on legal tender.

If the government at any time needs gold it has to go to the banks or to allied institutions to get it. But if the banks were delinquent in maintaining redemption, have we any means of compulsion to keep them up to the mark? In this respect the bank certainly occupies a better position than the government. A bank failing to redeem can be immediately sued in the courts, and can be obliged to keep its promises or go into liquidation. Not so with the treasury. If the treasury ceases to redeem it cannot be compelled to fulfil its obligations against its own consent. Only if Congress permits, can the holder of its note proceed against the government for failure to redeem. For seventeen years, 1862–78, the government was in fact derelict in paying coin, and was able to do so with impunity. The great wealth of the country did not save us from this ignominy.

Yet the opinion is prevalent that the whole wealth

of the nation lies behind the government paper, for which the credit of the country is pledged. Therefore, government issues would have a greater safety than those of banks. To this it might be said that no boy should be without apples as long as there are trees full of apples in well-guarded enclosures. There are the apples; but the boy does not own them. How can he get what he does not own? Similarly, the great wealth of the country is not owned by the state; and the state can take that wealth only by the forms of law which permit its acquisition by taxation or borrowing. It cannot steal. Then, if there is no limit to taxation and borrowing, say government-paper advocates, the state can always secure gold enough to maintain its paper at par. But men do not always do what they ought to do. Even if there is boundless wealth, but if none of it is taken to secure the paper, the great wealth of the country adds no more value to the paper than a summer's crop of thistledown. Moreover, the treasury may have reached its limits of taxation and borrowing and can obtain nothing to be used for the protection of its paper money. And since it cannot be required by court procedure to redeem its money, if it wishes not to redeem, then it is clear that the character of the paper is dependent not on the wealth of the country, but on the whims of Congress to whom the currency is subject.

The case is even more favorable for the banks than this. Apply to government paper the same test as

that applied to bank-notes. If a bank issues its notes as the result of a loan, it must receive assets in the form of promissory notes or securities as an equivalent. Indeed, the quality of such assets is constantly brought into discussion. A skeleton account of a new bank would show the situation:

Liabilities		Assets	
Capital	$100,000	Loans	$400,000
Notes	400,000	Reserves	100,000

Here the issue of notes is followed *ipso facto* by the receipt of an amount of assets sufficient to secure the repayment of the loans. With this compare the operations of the treasury:

Liabilities		Assets	
Capital	$.....	Securities (for notes)	$.....
Notes	400,000	Reserves (perhaps)	100,000

By the very nature of a government, it does not receive collateral when it issues notes. It is not a bank. It does not get assets which equal the sum of note issues. As a rule, what the government gets for the notes when issued is (as in the buying of munitions of war) consumed, or made unavailable as an asset of value. And the scraping up a gold reserve is regarded as a very virtuous deed. Now, a bank which

took the assets received for its notes and used them up would be jeered out of existence. But if the directors spent the $400,000 of the bank's assets in champagne suppers, they would still have quite as good a protection for the notes as the treasury.

In truth, bank-notes can be made as safe as any kind of money by proper rules as to reserves, guaranty funds, lien on assets, and the like. The treasury, on the other hand, is little likely to submit to shackles which are easily imposed on a bank.

Since the quality of the government paper is not really maintained by the wealth of a country—any more than the thirst of a prisoner in a dungeon is slaked from the cool lake he sees outside—it is obvious that the value of the paper is determined by the action of a Congress usually made up of active politicians. In short, government notes are at the mercy of every passing whim of the voters, whom the politicians sedulously court. Money should be left to experts; but in fact government paper never can be so left, as long as it is the plaything of politics. That is the curse of all government issues of notes, just as it is the curse of custom duties which are made political issues. Therefore, the strongest possible reason for relegating the system of paper issues to the banks, under general rules fully providing for elasticity and safety, is that they would be entirely removed from politics. If no other argument were presented, this one alone, judging not by theory but by actual experience, should be

sufficient to induce us to decide in favor of bank issues. And this conclusion seems to have been already reached by those great commercial nations which are our closest rivals for the trade of the world.

Thus, in the great case of Government *vs.* Bank Issues before the people, the jury ought to find in theory and in fact in favor of the Bank Issues. Such a finding would be a protection against arbitrary party action by a central government under mere political pressure and it would be in line with the democratic tendencies of the age.

CHAPTER XI

THE MONETARY COMMISSION OF 1897

§ 1. Calm and yet friendly critics of democratic institutions, like Mr. Lecky in his *Democracy and Liberty*, have pointed out the existence of unmistakable dangers which have appeared in the process of our political development. To these dangers we are not blind; but while we always regard them as serious, yet to our American optimism they seem sporadic and not chronic. We have fallen into the habit of accepting the fact that American life and ideals are not truly expressed in our political activity, or in our legislation; that intentions and results are badly mated. The superiority of our ideals over our political action—if that be granted—seems to be due to a neglect of political duties. The preoccupation of an intensely industrial community, engaged in exploiting the amazing resources of a new country, has left us temporarily neglectful of our civic obligations.

From this point of view, it is reasonable to suppose that political indifferentism—sometimes too long continued, as in the case of an abiding endurance of bad monetary legislation—must be ascribed to an absorption of mind in other directions. Moreover, although

the losses and damage wrought by erroneous politics are extraordinary, yet the return of wealth to skilled human effort is so great, and our phenomenal resources yield such enormous totals, that the losses are accepted and forgotten. This way of doing things may not indicate a discriminating and frugal mind; but it is the way that is natural to an immature people in the midst of rapidly accumulating riches.

To some minds, the stolid acquiescence for decades in vicious legislation—so long endured that its viciousness has become notorious—seems to be an exhibition of American indifference so discouraging that we should frankly, although reluctantly, admit the "degradation of American politics" as an inevitable consequence of democratic institutions. There seems indeed to be a basis for such reflections. That a bad monetary system like that of the United States should not merely have found a place in our legislation, but should also have remained in force for more than a generation, when qualified observers at home and abroad had repeatedly foretold disaster; that losses of untold millions should have been suffered in commercial ruin directly traceable to defective monetary enactments, when the application of plain business principles would have made this damage impossible; that our country should have been painfully writhing in distress and weighed down by industrial depression at the very time when foreign countries were recording the largest exports and imports and the greatest prosperity in all their

history—all this seems inexplicable and astounding. Is it any wonder that, by many thoughtful people, this long continuance in a blundering and costly policy by an ambitious country should be regarded as proof of a deep-seated incapacity on the part of a democracy to successfully meet its problems—to appreciate, for instance, the gravity and complexity of problems such as must arise in establishing a sound fiscal and monetary policy, and then rise to a fit solution of them.

There are some of us, however, who might take a more cheerful view. In spite of some inexplicable aberrations from sound judgment, and of some strange hallucinations for a brief time, no estimate of the American electorate is correct which fails to recognize its fundamental good sense, honor, and intelligence. A sympathetic, and therefore a truer, insight will lead one to notice symptoms indicative of very sane and healthy action, but which are often overlooked in the hasty bustle of obtaining immediate political results. The reserve force of right action in the American people, which can be called upon in any great emergency, must always be reckoned with by statesmen. The great democratic giant moves on his busy way, absorbed in developing the crude resources of a new land, settling the pressing needs of a new, but ambitious, community, striding on magnificently to material wealth, self-centred and often serenely unconscious of ugly signs of disease, which, as yet, have made little or no impression on his inner strength and vitality.

An unexpected tumble, a surprising blow, now and then, seem to have no perceptible influence in retarding his ultimate and confident progress. But when, by recurring twinges, this big personality is once made fully conscious that something is permanently injurious to his health—when, for instance, he discovers that his monetary diet gives him an excruciating colic, increasing in intensity—we are likely to witness the direction of great energy toward the discovery of a cure. And, if I am not greatly mistaken, that is what we were able to observe in the movement for the reform of our monetary legislation.

There arose unmistakable evidences that the industrial interests, quite irrespective of party affiliations, were exhibiting a change of emphasis; withdrawing their attention, for a time, from the engrossing tasks of production and manufacture in order to examine into and remedy the dangerous consequences of a vicious monetary policy. This was a decidedly healthy and encouraging sign. Our great democracy, noting a pronounced lassitude in its system, racked in every part of its body by suffering and distress, stopped in its onward strides in the path of prosperity, and reluctantly admitted that it could take up its work again only after its disease had been diagnosed and proper remedies applied. Those of us who despair too easily of the republic must, therefore, be patient, and allow time enough for large forces to complete the cycle of examination and reform. A return to

sane methods may be slow, but it is inevitable, if we are to remain a commercial nation.

Foreigners are often pleased to speak condescendingly of American optimism—a confidence that, in spite of corruption and malodorous administration, everything will eventually work out a good result. After all, is this so-called optimism anything more than a surer knowledge on the part of those who know our democracy most truly? If it be a fact that, as I have already observed, there is a great reserve force of good sense, honorable purpose, and shrewd intelligence among our people, which in supreme crises, or after long irritation, is sure to rise spontaneously to set the nation aright, then we, who have faith in our country, are not basing our hopes on imagination or sentiment. Even though the moral force of the community sometimes slumbers until impatient persons announce its extinction, it is still there, to be awakened when there is less preoccupation with the eager pursuits of industry. It is the peculiarity of our democracy—hardly a vice, unless a habit of procrastination may be called a vice—that time and effort are needed to awaken its consciousness to a proper understanding of an evil, and to connect an aroused moral sense with some definite plan of legislation.

It is to be observed, moreover, that a passing craze should not be mistaken for an awakening of the public consciousness. A temporary flirtation with an issue, tricked out in false braws to counterfeit beauty, is not

the same as the deep affection which guides permanent action. The public may flirt with this or that dangerous issue for a time; but a permanent alliance is out of the question. In our land, an impression upon the inner consciousness by a grave matter is slow and difficult. Geographical separation and diverse climates within our own boundaries make practically separate communities, with different feelings and standards, and with diverse points of view. Hence, when those who have a common purpose to attain are many in numbers, it is difficult to find each other out and to act in concert. This explains why it is that the creation of a common understanding is a slow process, often obtained only through panics and suffering, and that leadership and organization to carry this understanding into positive legislation are of first importance. The mere fact that an ill has been long endured is not in itself discouraging; for when the existence of an evil has once been generally recognized, the end is not far, if a leader appear.

§ 2. Whatever the immediate causes, it will be admitted by all that the public consciousness had been at last thoroughly awakened to the evils of a bad monetary system—or rather lack of system. The sufferings of the industrial organism were acute and unprecedented: the consciousness of disease was everywhere felt. If this be granted, the end was not far off. The questions universally asked were: "What is

wrong? What are the remedies?" This in its briefest form was the *raison d'être* of the Monetary Commission. It met to diagnose impartially the disease, and to prescribe the remedy. It was the outcome of a movement which reflected the healthiest operations of democracy that have been observed in recent years. It came from the people, by the people, and for the people. Above all party, above all sectional feeling, it was in the interests of the whole country, and not in the interest of any one man, nor of any particular region. Larger than any one industry or vocation, it was the outcome of all industrial life throughout the length and breadth of the land, and stood for the dignity of labor and production when these demanded the right to be freed from artificial barriers to profitable and steady employment. It gave evidence of the healthy condition of popular government. Stultifying acquiescence much longer in a fatuous monetary policy might properly have been regarded as proof of the degeneration of our institutions, and of the flabbiness of the public conscience. The extent of this movement among the business interests, its spontaneous origin, its non-partisan character, were exceedingly hopeful. Although long delayed, it showed itself so steady, so direct, so uncompromising, that it became a wholly novel and unprecedented part of political activity. Never before in our history had the business interests of the country combined to secure the formulation of a sound monetary system,

with the evident purpose to follow the announcement of that result by a formidable campaign in every district and precinct of the nation. It was a strong demand based on the dignity and self-respect of our industrial life.

On November 18, 1896, the governors of the Indianapolis Board of Trade invited the Boards of Trade of Chicago, St. Louis, Cincinnati, Louisville, Cleveland, Columbus, Toledo, Kansas City, Detroit, Milwaukee, St. Paul, Des Moines, Minneapolis, Grand Rapids, Peoria, and Omaha to a conference on the 1st of December following, to consider the advisability of calling a larger convention from commercial organizations throughout the country for the purpose of discussing the wisdom of selecting a non-partisan commission to formulate a sound currency system. This preliminary conference, after long deliberation, issued a call for a non-partisan monetary convention of business men, chosen from boards of trade, chambers of commerce, and commercial clubs, to meet in Indianapolis, on January 12, 1897. In the call, attention was drawn to the fact that a necessity for such legislation as would establish our currency upon a sound and permanent basis was generally conceded by business men. In view of what I have said, it is noteworthy that the call contained these significant words:

"The business men have been accused of neglect of political duties. In ordinary times there may be some

foundation for this charge; but at every critical juncture in the history of our country, when the nation's prosperity, honor, or general welfare was seriously in danger, they have, in the spirit of enlightened patriotism, risen to the full measure of their duty; and we believe that the painful experience of the country under the existing laws on the subject of the currency admonishes the business men that we have reached a point where it is their duty to take an active part in helping to solve the great questions involved."

Here is the evidence that the public consciousness had been awakened.

At the convention, held January 12, 1897, there assembled, with credentials, two hundred and ninety-nine delegates—men of high character and distinction—representing business organizations and cities in nearly every State in the Union. Indeed seldom had a more influential body of men of experience and ability been brought together. The result of its deliberations was expressed in resolutions conveying the idea that no progress could be made until a definite plan of monetary reform should have been agreed upon, to which public attention could be directed. The resolutions, which received enthusiastic adoption, began as follows:

"This convention declares that it has become absolutely necessary that a consistent, straightforward, and deliberately planned monetary system shall be inaugurated, the fundamental basis of which should be:

First, that the present gold standard should be maintained. Second, that steps should be taken to insure the ultimate retirement of all classes of United States notes by a gradual and steady process, and so as to avoid injurious contraction of the currency, or disturbance of the business interests of the country, and that until such retirements provision should be made for a separation of the revenue and note-issue departments of the treasury. Third, that a banking system be provided, which should furnish credit facilities to every portion of the country and a safe and elastic circulation, and especially with a view of securing such a distribution of the loanable capital of the country as will tend to equalize the rates of interest in all parts thereof."

Recognizing the absolute necessity of committing the formulation of such a plan dealing with complicated currency questions to a body of men trained and experienced in these matters, a commission was proposed. In case no commission should be authorized by Congress in the spring of 1897, the executive committee of the convention was authorized to select a commission of eleven members, "to make thorough investigation of the monetary affairs and needs of this country, in all relations and aspects, and to make appropriate suggestions as to any evils found to exist, and the remedies therefor."

When the labors of the commission had been completed, it should make "report of its doings and suggestions in such manner and form as it shall deem

best adapted to present the same to this convention and its members for action, and, if legislation is deemed advisable, shall accompany such report with a draft of such bill or bills providing for such legislation."

Congress did not authorize the appointment of a monetary commission; and the executive committee of the Convention selected a commission of twelve members,[1] which began its sittings in Washington, September 22, 1897.

§ 3. The reason why the movement for currency reform crystallized in the appointment of a monetary commission was solely because of the impelling force of public opinion. The monetary panic of 1893 and the disasters of 1896 were not suffered in vain, if, out of the stress and strain of those four years there came a deep-seated conviction that indifference to great evils was no longer possible. The whole purpose of a commission was that it might present definite recommendations for which a public opinion had already created a demand. Was it not well to protest against the indiscriminate criticism of Congress on the ground that it had taken no action toward currency reform? Certainly it were far better to put the responsibility where it really lay—with the absence of a definite con-

[1] George F. Edmunds, Vermont, chairman; George E. Leighton, Missouri, vice-chairman; T. G. Bush, Alabama; W. B. Dean, Minnesota; Charles S. Fairchild, New York; Stuyvesant Fish, New York; J. W. Fries, North Carolina; Louis A. Garnett, California; J. Laurence Laughlin, Illinois; C. Stuart Patterson, Pennsylvania; Robert S. Taylor, Indiana; and L. Carroll Root and H. Parker Willis, secretaries.

viction as to specific measures on the part of the general public. Indeed, some persons question whether Congress should ever legislate except in answer to a clearly expressed mandate from the people. At any rate, it was puerile to waste time gossiping as to who was to blame for the existing evils in our currency system. If any one body was more to blame than another, it was the general public. In fact, we had about us as good—or bad—a monetary system as we deserved, considering the intelligence that had been given to it. The really important matter was the general belief that conditions then contained potential disaster, and that they must be changed for the better. If our currency were in such a state of unstable equilibrium that any future alarm, such as the one which came in the summer of 1896, might produce a paralysis of trade and industry, then it was bad business policy to leave our currency as it was then.

The striking thing in looking back over forty years is, that we have never observed any steady, continuous policy in regard to our currency. During most of that time, industry was handicapped by the uncertainty of a depreciated, or a doubtful, standard of prices and payments. The whole importance, therefore, of the spontaneous uprising of business interests in the Convention of January 12, 1897, resided in the creation of a commission, instructed to formulate a consistent monetary policy, which might be laid before the public with a view to its guidance and instruction.

A struggle could then be inaugurated to incorporate into legislation, as rapidly as possible, one part after another of this general plan. In short, the commission had it in its power to set up a pillar of cloud by day and a pillar of fire by night, to guide the followers of sound monetary principles through all the marches and campaigns of coming years, until they should reach the promised land where freedom from monetary disturbances should be ever secured. Granting that all the conclusions of such a commission could not at once be enacted into law; yet the very existence of such a body of recommendations would in itself be a fact which must be reckoned with. It was high time that some monetary Sheridans should appear far in front of the hesitating armies, to order the battle-standards to be planted well forward, and courageously to form the troops upon the new and advanced line.

It should be especially noted that the whole movement, of which the commission was the outcome, was essentially democratic. Members of chambers of commerce and of other commercial bodies, representing all parts of the country, assembled for consultation and for the formulation of remedies for existing dangers to industry. They gathered together and appointed their representatives to act for them in regard to currency legislation in the same manner as would any convention of merchants seeking redress, for instance, from injurious bankruptcy laws. The commission was merely the agent of the great business

constituency. The commission and the body from which it sprang were parts of but one movement. If it was impertinent for the commission to deliberate upon currency matters, then it was equally impertinent for the business interests to give attention to them.

It is hardly necessary to point out that these practical men of our land were acting wholly in the letter and spirit of the First Amendment to the Constitution, which preserves "the right of the people peaceably to assemble, and to petition the government for a redress of grievances." The right of petition has been effective on many important occasions. In England, petitions brought about the abolition of slavery, the emancipation of the Roman Catholics, and the repeal of the corn laws. Petitions which should prayerfully present the conclusions of the Monetary Commission would not offer the opinions of a self-constituted body of eleven men, but those of the duly accredited representatives of the commercial, manufacturing, banking, and agricultural interests in different parts of the United States. It was not impossible that a "Merchants' Petition" in the New World might give another date to the records of progress in commercial history.[1]

§ 4. The merchants of our country, moreover, in this movement which culminated in the creation of a

[1] The work of the commission resulted in the Act of March 14, 1900.

commission, took a position that indicated the appearance of a new dignity and self-respect. It is a commonplace of democratic government to insist that all forms of labor—each and all the industrial occupations—should be regarded as equally honorable, and that there are no privileged classes. The day, when no "tradesman" can be presented at the official receptions of our government will never dawn for an American. All this may be true, and more. It is not as generally recognized as it might be that the great preponderance of the brains and genius of our people is to be found in the industrial occupations of our land. The men who officer the great industrial machinery of production and trade are constantly putting forth an effort of mind, a creative force, an originating power, such as seldom appear in other professions. In fact, the ablest and most competent men are, by the operation of our social development, drawn into the service of business. Had the scholars of our time the driving energy and intellectual quality of their industrial brothers, scholarship would advance by leaps and bounds far faster than it does now. Nothing in our American life is more marked than the prodigious display of virile and penetrating intelligence in all the departments of business activity. Only too often are men obliged to seek the so-called learned professions because they cannot possibly achieve success in commercial life in face of the intense competition of strong men.

Yet it is not uncommon to hear depreciative remarks about "mere business men." Indeed, by some strange survival of traditions, there has been impalpably conveyed to the public judgment a bias, more or less pronounced, which has placed the business man in a doubtful rank of influence. Strangest of all, in a democracy like ours, the man of affairs has felt constrained at times to assume an apologetic attitude toward his fellows. In view of his powers and his daily services to society this seems quite inexplicable. In illustration of this attitude reference may be briefly made to the profession of banking. I am fully aware that what I may say in this connection may be misquoted and misconstrued and regarded as showing a weak subserviency to wealth. The question, however, is "What is the truth?" not "What will men say?" And it is high time that some one should have the courage to tell the truth about bankers and banking.

The widely diffused prejudice against bankers comes from persons who know nothing whatever about the business of banking, or are ignorant that bankers gain a profit only from their discounts by buying and selling something in no other way than other men do who may have invested their capital in dry goods. The banker does a service which others require. No one is obliged to accept a loan. The service is rendered by voluntary action on both sides. In no sense does a banker earn his profit in any way different from an expressman or

a cab-driver: the one invests his capital in the work of supplying society with the machinery of exchanging and transferring goods, the other invests his capital in a machine for the transfer of persons or goods from one spot to another. It is as ignorant and childish to say that all bankers are bad as to say that all cabmen are good. Bankers are every day rendering a service to society without which industry could not possibly go on: they make exchanges of goods possible in a marvellously skilful manner, and increase the power of production and the efficiency of labor in ways little understood.

The relation of the banker to his clients is generally a closer and more confidential one even than that of the clergyman to his parishioners. Every man in business, sooner or later, needs assistance at critical moments. Not to get it means failure, bankruptcy, and poverty for his family. Perhaps no man in the community, therefore, is the recipient of more sacred confidences, more inside knowledge of his client's struggles and hopes, than the banker. And every day we are intrusting our savings and investments to his honor and probity. Think for a moment of the service to society performed by a banker who vigilantly keeps intact for our daily use the millions upon millions of dollars of deposits! If he were ever distrusted for one hour, imagine the chaos that would supervene, and picture the loss to innocent people who are obliged to rely on skilled advice for investment! Is it not

then a piece of cowardly and unmanly wrong on the part of some of our people to describe these men as "harpies" and "plunderers of the poor"? The sense of fair play should require retraction of such untruth; for untruth it is. It is set afloat by persons who have absolutely no knowledge of what they are talking about; it is tossed about by those whose stock in trade is to excite antagonism between the rich and the poor. So far has it gone, that the banker is almost excluded from public life. The demagogues and charlatans have actually led bankers to assume an attitude which admits that they have no influence.

If, therefore, this rising of the business men of the whole country meant anything, it meant an increasing sense of self-respect and dignity. They have as much right to unite in a movement for the protection of trade and industry from ignorant or dishonorable assault as to arrange for immunity from burglary or sandbagging. The right-minded man of affairs has the same inalienable privilege of demanding justice and freedom for his work as the religious man has to demand protection and freedom in the exercise of his conscientious scruples. But so long had the business interests been accustomed to bad monetary legislation that the apologetic attitude of mind was not easily thrown off: they at first hesitated to demand all that was rightfully theirs. Then, however, the spirit began to change. It began to assume with busy men the character of a holy war for justice and for

their rights. They refused any longer to permit matters of vital interest to employers and employed—to industry as a whole—to be tossed about the political field in the game of politics.

APPENDIX

LAW OF SANTO DOMINGO, 1894

THE NATIONAL CONGRESS IN THE NAME OF THE REPUBLIC

At the initiative of the Executive Power, upon previous declaration of urgency, and the three constitutional readings, has passed the following:

LAW CONCERNING DOMINICAN COINS AND THEIR COINAGE

CHAPTER I

MONETARY SYSTEM

Article 1. The Dominican Republic shall have coins of gold, of silver, and of nickel.

Article 2. The fineness for all gold and silver coins shall be nine hundred thousandths of pure metal for one hundred thousandths of alloy. The alloy of the gold coins shall be of copper, or of copper and silver, the silver not exceeding one-tenth part of the alloy. The alloy of the silver coins shall be of copper. The nickel coins shall be of copper and nickel, being composed of three-fourths parts of copper and one-fourth part of nickel.

Article 3. The legal monetary unit in the Republic shall be the "gold dollar." The legal weight of this gold dollar shall be twenty-five and eight-tenths grains, of troy weight, for the gold coins, of which twenty-three and twenty-two hundredths grains shall be of pure gold. That of the silver coins shall be four hundred and twenty-two and two-ninths grains, troy, of which three hundred and eighty grains shall be pure silver in each silver dollar.

Article 4. The "dollar," or unit of account, shall be divided into one hundred parts, called "cents," and the weight of the "half-dollar," of the "quarter-dollar," and of the "ten-cent"

pieces shall be respectively the half, the quarter, and the tenth part of the weight of the silver "dollar."

Article 5.

I. The gold coins of the Republic shall be the following:

a) The piece of gold of 20 dollars, which shall weigh 516 grains, troy gold weight.

b) The piece of gold of 10 dollars, which shall weigh 258 grains, troy gold weight.

c) The piece of gold of 5 dollars, which shall weigh 129 grains, troy gold weight.

II. The silver coins of the Republic shall be the following:

a) The silver piece of one dollar, which shall weigh 422⅝ grains, troy gold weight.

b) The silver piece of fifty cents, which shall weigh 211⅛ grains, troy gold weight.

c) The silver piece of twenty-five cents, which shall weigh 105⅝ grains, troy gold weight.

d) The silver piece of ten cents, which shall weigh 42⅝ grains, troy gold weight.

III. The nickel coins shall be the following:

a) The nickel piece of 2½ cents shall be of the same weight and dimensions as those now in circulation.

b) The nickel piece of 1¼ cents, *idem, idem.*

Article 6. The gold and silver coins shall be circular in form, with milled edges. The size or diameter of the different coins shall be the following:

I. Gold coins.

a) The gold piece of 20 dollars shall have a diameter of 34.28937 millimetres.

b) The gold piece of 10 dollars shall have a diameter of 26.66951 millimetres.

c) The gold pieces of 5 dollars shall have a diameter of 21.58960 millimetres.

II. Silver coins.

a) The silver pieces of one dollar shall have a diameter of 38.09931 millimetres.

b) The silver piece of fifty cents shall have a diameter of 30.47944 millimetres.

c) The silver piece of twenty-five cents shall have a diameter of 24.12956 millimetres.

d) The silver piece of ten cents shall have a diameter of 17.77967 millimetres.

Article 7. The design for the nickel coins, as well as the other conditions of said coins, shall be fixed by decree, which the executive power shall be authorized to make.

Article 8. The design for the gold and silver coins shall be as follows:

Upon one face, that is, upon the obverse, the figure of Liberty, looking toward the right, the head bound with a fillet, upon the surface of which is engraved the word "Libertad," and the figure surrounded by the letters expressing the value of the piece, and the date of its coinage. Upon the opposite face, that is, upon the reverse, the coat of arms of the Republic, surrounded by the inscription, "República Dominicana," and, underneath, the numbers or figures expressing the weight and fineness of the respective coins.

CHAPTER II

COINAGE OF COINS

Article 9. The coinage of national money, in accordance with the provisions of the present law, during the continuance of the concession of the "Banco Nacional de Santo Domingo," granted to the "Crédit Mobilier," 15 Place Vendôme, Paris, on the 26th of July, 1889, or during the existence of said "Banco Nacional," shall be executed in preference by that establishment, in accordance with Article 15th of the law of its creation. In case the "Banco Nacional de Santo Domingo" should not be able to execute the coinage in conformity with this law, the Executive will sign the necessary contracts with foreign mints, the operation of which shall be under the inspection of the Fiscal Agent of the Dominican Republic, its Minister or Consul, who resides in the place where the coinage is struck.

Article 10. The maximum and minimum of the gold and silver coins, or the deviations permitted in their weight, shall never exceed the following limits of tolerance:

I. In the gold pieces of 20 dollars and 10 dollars, the half of a grain. In the piece of 5 dollars, one-quarter of a grain.

II. In the silver pieces of *one dollar*, of *fifty cents*, of *twenty-five cents*, and of *ten cents*, one and one-half grains.

CHAPTER III

OF CIRCULATION

Article 11. The pieces of five-francs, one-franc, and a half-franc, ordered to be coined in conformity with the law of July 16, 1890, and of which there are in circulation 950,000 francs, are subject to the provisions of the Decree of December 23, 1891, and, therefore, will be received at the same rate as the Mexican dollar, and the fractions thereof; that is, the Dominican piece of five-francs shall continue to circulate at the rate of one Mexican dollar; that of one-franc shall circulate as a fifth part of the same Mexican coin; and the piece of a half-franc in the same proportion.

§. The nickel and bronze coins, now in circulation, shall continue to do so at their nominal value in Mexican coins, which serves as a basis for their present circulation.

Article 12. All debts and obligations, both public and private, contracted before the 1st of June next, shall be paid in the same money in which they have been contracted. The debts and obligations which are contracted after that date thenceforward shall be satisfied conformably to agreement between the parties.

§. The national gold coins shall be a legal instrument for the payment of any sums whatever; the same with the national silver coin and its fractions. It is provided, nevertheless, that until the coins created by the present law are coined and ready to enter into circulation, public and private debts, including fiscal and municipal taxes, may be satisfied in Mexican silver

money, which shall be received for what it is worth as compared with American gold.

§ §. The "Contaduría General de Hacienda" will communicate to the offices under its jurisdiction, weekly, the exchange rates that exist between gold and Mexican silver, in order to fix regularly the rate at which said Mexican silver shall be accepted in the payment of fiscal duties; and this same rate shall govern the payment of municipal taxes.

§ § §. As soon as the Executive Power shall have announced to the public that the new national coinage is ready to be put in circulation, the Mexican silver dollar shall be receivable in payment of fiscal duties at five cents less than the value for bid quotations in the markets of the United States of North America.

Article 13. There is not designated in the present law the amount of gold and silver coins, or minor coins, which shall be issued in accordance with the provisions contained in it, and the Executive Power shall announce by means of a decree the amounts that are to be coined to meet the requirements.

Article 14. In view of the lack of a mint, or mints, by the Government of the Republic, it is authorized to create a Fiscal Agency for the manufacture, issuance, and redemption of its coin, and for the maintenance at par in gold of the silver and other coins of the national coinage; for which purpose this Agency shall have its principal office in the capital city of Santo Domingo, and branches in Puerto Plata, Sanchez, and Santiago.

Article 15. It is understood that this Agency and its branches mentioned shall remain under the charge of the "Banco Nacional de Santo Domingo," if said establishment, in accordance with the power already mentioned, which was granted to it by Article 15 of the Law of Concession, claims the right to coin the Dominican money, and contracts with the Dominican Government for all that concerns that operation.

Article 16. The dollars and other silver coins and minor coins, provided that they have the weight and fineness which are indicated in Chapter I of this monetary law, shall be ex-

changeable at their face value for Dominican gold coins in sums of not less than five dollars on presentation at the offices of the Fiscal Agency, or of the "Banco Nacional."

§ If, by reason of any extraordinary or unexpected demand for the redemption of silver coins by gold, the deposit of gold in reserve in the treasury of the Fiscal Agency, or of the Bank, or of any of their branches, should become exhausted, said Agency or establishment, or branch, may tender as payment in said redemption a draft on a financial institution in New York, meanwhile approved by the Government, and payable in the gold coin of the United States of America, and of equal value to the sum exchanged, at sixty days sight, together with interest at the rate of six per centum per annum.

Article 17. The "Banco Nacional de Santo Domingo," having, as stated, the privilege of coining the national money which the Government of the Republic desires to manufacture for the commercial and fiscal necessities of the Nation, the Executive Power, immediately after the promulgation of the present law, and of that which it requires and directs, shall communicate it to the principal establishment located in this capital city, as also the amounts of the respective denominations of coins which are to be manufactured, and the time within which said coins must be delivered for their circulation in the Republic. Said bank shall then, within the sixty days after its notification by the Fiscal Agents of the Government in Paris of the necessity for the coinage, state in writing to the said Executive, or to the agent selected by him for that purpose, its intention to comply with the provisions of the present law, and with the said notification which is made to it to coin the amount of national money which is ordered to be manufactured, in which case, the said bank shall be constituted the Fiscal Agency of the Dominican Government for the issue and redemption of the coins as herein provided, and shall have all the powers, privileges, profits and obligations which may be derived from such capacity.

Article 18. If the said "Banco Nacional de Santo Domingo"

shall not announce its intention to comply with the provisions of this law and with the notification of the Fiscal Agent of the Government in Paris, within the specified term of sixty days, such omission shall be considered as a waiver of the right to make this coinage; and if, after having expressed its intention to comply, it does not do so within the time fixed by the Executive, it shall be deemed as a like waiver.

Article 19. In case of an express waiver of the coinage, or of the right to make it, as well as of the functions of the Fiscal Agency to redeem and distribute it, under all the provisions of the present law, the National Executive is authorized to designate the bank or company which shall perform the duties of said Agency; and the regulations which shall be established by the Executive with the Agency referred to in the form of a contract, shall have the force of law.

CHAPTER IV

IMPORTATION OF COINS

Article 20. No coins, of gold, nor of silver, nor of the minor coins, shall hereafter be issued by the Government of the Dominican Republic, which are not of the denominations, standard, and weights, herein established; and no person or company whatever shall be permitted to import these coins except the parties to the contract for furnishing these coins, according to the agreement with the Executive Power, in accordance with all the provisions of the present law.

Article 21. The national coins shall be imported by the persons or companies with whom the contracts may be entered into for their coinage and introduction; and they shall come accompanied at each importation by official documents signed by the persons specified in Article 9 of this law, declaring that the pieces bear their seal, and conform in all respects with the legislation therefor.

CHAPTER V

GENERAL REGULATIONS

Article 22. Upon publication made by the Executive regarding the date at which these coins ordered to be coined shall enter into circulation, proper arrangements, wherever necessary, shall be adopted for introducing the denominations of the new system of money in all the accounts of the Government offices and of the municipalities.

Article 23. All coins manufactured by other persons than those who may be parties to contracts with the Government under the present law, shall be seized wherever found. The value of the metal in such coins shall be the property of the informer, and all those who may be adjudged as principals or accomplices in such acts shall suffer the penalties which the criminal laws provide for the counterfeiters of money.

Article 24. All laws and provisions contrary to the present law shall be deemed after its publication as null and of no value or effect.

Article 25. The Executive Power shall decree the rules and regulations which he shall judge necessary for the strict observance and enforcement of the present law, and all that concerns it.

Article 26. The present law shall be sent to the Executive Power for its publication and other constitutional purposes.

Done in the Hall of Sessions of the Honorable National Congress, on the 28th day of the month of April, 1894, the 51st year of Independence and 31st of the Restoration.

The President: JORGE CURIEL.
Secretaries: R. GARCIA MARTINEZ,
C. NOBOA, HIJO.

Let it be executed, communicated by the proper Secretary, and published in all the territory of the Republic for its enforcement.

Done in the National Palace of Santo Domingo, Capital of

the Republic, on the 28th day of the month of April, 1894, the 51st year of Independence and 31st of the Restoration.

The President of the Republic,
U. HEUREAUX.

Countersigned: The Minister of Finance and Commerce.
RIVAS.

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